King County

Residential Foodwaste Collection Pilots

Interim Report - March, 2003

Prepared by:
Sound Resource Management Group, Inc.

The following report highlights the findings to date and estimated future diversion potential of Residential Foodwaste Collection from pilot projects within 4 suburban King County cities.

King County Solid Waste Division wishes to thank the following entities for their efforts to date: the pilot cities of Issaquah, Kirkland, Lake Forest Park, and Redmond; the hauling companies Eastside Disposal Inc. and Waste Management Inc.; and the Cedar Grove compost facility.

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1. Introduction

In King County, approximately 30-40% of the residential waste stream collected from single-family residences is composed of foodwaste, yard debris, soiled paper and other potentially compostable organic materials. The organics component of the residential waste stream offers the highest diversion potential of the currently disposed waste stream. The diversion of additional organics offers a number of advantages beyond the goal of simply diverting waste from landfills, including: reduced concentration and toxicity of leachate, reduced landfill gas and production of needed beneficial soil amendments.

The King County Solid Waste Division, along with participating cities and haulers has been conducting a pilot organics collection program in four cities since Spring 2002. The pilot objectives are to recover and divert the widest possible range of organic material as is cost-effective, while either minimizing or reducing the overall residential solid waste collection system costs. While a number of organics collection pilots have been performed in Western Washington during the past decade, few if any, have attempted to implement a large-scale pilot program that has the potential of operating sustainably into the future without continuing subsidies. The pilots were designed to be as economically and operationally sustainable as possible.

Each city previously provided yard debris collection at no additional charge, as part of the bundle of services funded through garbage collection fees. Residents in pilot areas were instructed to place all foodwaste, soiled paper and yard debris, combined, in their yard debris collection container. Pilot cities included Kirkland, Issaquah, Lake Forest Park and Redmond. Table 1 summarizes the pilot area, haulers, number of households and the pilot start date.

Table 1 – Pilot Areas

City	Hauler	Pilot Households	Start Date
Kirkland	Waste Management	225	4/1/02
Issaquah	Eastside Disposal/ Rabanco Ltd.	439	4/1/02
Lake Forest Park	Eastside Disposal/ Rabanco Ltd.	296	5/1/02
Redmond	Waste Management	715	4/1/02

Each city had varying yard debris collection configurations, which allowed the testing of organics collection under a variety of implementation scenarios. A Memorandum of Understanding was negotiated between the consultant, each city, each hauler and the County to define respective responsibilities, funding

contributions and compensation. A copy of a sample memorandum is provided in Appendix A.

The City of Kirkland previously had the only flat rate residential garbage collection in King County. Under the flat rate system, residents could place up to five cans of garbage out for collection at a single universal rate. Yard debris and recycling collection costs, including containers, were embedded in the flat rate. The flat rate program was shifted to a variable rate system in April 2002, one month before the start of the organics pilot program. The City also shifted, in March 2002, from a 3-bin recycling system to a cart-based program, with all paper fibers placed in a 64-gallon cart and all containers placed in a 14-gallon bin. These two major changes occurred right before the start of the organics pilot.

The City of Redmond's solid waste collection system remained unchanged, other than to allow residents to place foodwaste and soiled paper in their yard debris carts. The City of Redmond had previously purchased semi-aerated carts for yard debris collection at the time the City started its 1994 collection contract. The semi-aerated carts are essentially a first generation aerated cart and include a bottom shelf and liquid collection sump as well as holes in the top. All residents received a cart under the 1994 contract. Both recycling and yard debris collection are embedded in garbage rates and are provided at no additional charge.

The City of Issaquah's solid waste collection system also remained unchanged, other than to allow residents to place foodwaste and soiled paper in their yard debris container. Unlike the other weekly collection pilot cities, Issaquah customers were not provided yard debris carts as part of the basic service. Although yard debris collection costs were embedded in rates, if customers wanted a wheeled cart, they had to rent it separately. As a result, relatively few customers used wheeled carts, and most relied on a specially marked metal or plastic "garbage can." Thus, the pilot served to test the performance of expanded organics collection in a city with a high percentage of customer-supplied cans.

The City of Lake Forest Park had every-other-week yard debris collection, with collection costs embedded in the garbage rates. Customers were allowed to use either customer-supplied cans or a rented cart from the contractor. The pilot program in the City of Lake Forest Park is significantly different than those in the other cities. Aerated carts were delivered to all households in the pilot area in order to test the feasibility of every-other-week foodwaste collection. At the same time, garbage collection frequency was reduced to every-other-week, allowing a single truck to alternate between garbage and organics collection on successive weeks. This model has been used in eastern Canada to

reduce collection costs while simultaneously maximizing diversion. While successful in Canada, this model had not been previously tried in the U.S. and offers the potential to add organics collection at no additional cost in cities and unincorporated areas with existing every-other-week yard debris collection.

The City of Kirkland was the only pilot city with mandatory garbage collection. All other cities have optional garbage collection, although voluntary subscription levels are typically high—about 90%.

Kitchen containers were provided to all pilot cities' residences (except for a small area of Issaquah) either at the start of the program or four months into the pilot period.

Prior to the pilot, both Waste Management and Eastside Disposal delivered collected yard debris to Cedar Grove Composting ("Cedar Grove") in the Maple Valley area in southeastern King County. Yard debris was collected and shipped via transfer station (Woodinville in the case of Waste Management and South Seattle in the case of Eastside Disposal) to the composting facility. Pilot organics, including foodwaste and soiled paper, were also delivered to Cedar Grove for separate composting in the facility's covered "Zone 7" area. The separate handling required both haulers to bypass their regular transfer systems. In Waste Management's case, both Kirkland and Redmond's pilots picked up on Tuesdays, loaded in the same transfer trailers and delivered directly to Zone 7 at Cedar Grove. In Eastside Disposal's case, route trucks from both Lake Forest Park and Issaquah bypassed the company's transfer facility, and directly hauled and separately unloaded at Cedar Grove's Zone 7.

Table 2 – Containers and Collection Frequency

City	**Curbside Containers**	**Kitchen Containers**	**Collection Frequency**
Kirkland	64- or 96-gallon standard carts (existing)	Provided to all households in August, 2002	Weekly
Issaquah	Some rent carts; most use specially marked customer-owned cans	Provided to most households in August, 2002	Weekly
Lake Forest Park	New aerated 64-gallon Schaefer Compostainers (provided)	Provided to all households at start of pilot program in May, 2002	Every-other-week, alternating with every-other-week garbage collection
Redmond	64-gallon semi-aerated carts (existing)	Provided to all households in August, 2002	Weekly

The collected organics delivered by the haulers are unloaded on a bed of composting "overs" or fresh yardwaste collected that day from other routes to retain any free liquids contained in the mixed organics. The organics are then shredded and placed in an aerated static pile. After initial composting, the materials are moved out of Zone 7 and handled the same as other yard debris materials at the composting facility. It is worth noting that this approach is feasible in part due to the very high percentage of yard debris in the mixed organics. King County cities with embedded weekly yard debris service[1] achieve an average of about 1,200-1,300 pounds of yard debris per household per year. This quantity of yard debris far outweighs the amount of foodwaste and soiled paper available and actually captured in the pilot areas.

This report reviews the status of the on-going pilots after ten months of implementation through the end of 2002. Due to the fundamental differences between the weekly and every-other-week (Lake Forest Park) pilots, each is addressed separately in the following sections.

2. Weekly Pilots

The "weekly pilot" cities were Kirkland, Issaquah and Redmond. All had weekly yard debris collection for nine months of 2002 during the pilot program. Collection schedules in the non-pilot areas of cities were typically reduced to either every-other-week or monthly collection during the mid-winter months. For the duration of the pilots, organics collection was provided weekly throughout the year, including winter months.

2.1 Implementation

Implementation in each of the weekly cities was very simple. Since the only change to the collection systems was to allow residents to place a wider range of organics in their existing yard debris container, implementation mostly consisted of the initial notification to residents to inform them about the pilot program and how to participate.

Due to the desire to confine the pilot program notification strictly to households within the pilot area, no participation information was directed through media sources. The primary method of contact was through a mailed introductory letter and a brightly colored doorhanger (see Appendix B) delivered throughout the pilot areas during the last week of March, 2002. A food recycling hotline[2], web site and e-mail address[3] were provided to

[1] where yard debris collection is offered as part of basic garbage service at no additional charge
[2] (206) 352-9565

address questions from pilot area residents. Kitchen containers were not initially delivered in the weekly pilot areas, but were later as an attempt to increase participation.

This type of approach relied heavily on the introductory letter and the doorhanger to reach the responsible person within each household and to gain a level of interest and teach what participation in the pilot would mean. It became very apparent during the first pilot collection cycle that this method of promotion was inadequate. Visual observation during initial collection routes indicated that only approximately 5-10% of the pilot area households responded to the letter/doorhanger approach. This level was consistent during route monitoring conducted by a County intern several weeks into the pilot program.

During the initial months of the pilot, periodic newsletters (see Appendix C) were the primary promotional method. In July of 2002, kitchen containers were researched and containers were ordered for almost all households within the weekly pilot areas. A 10-liter container[4] distributed by Arata Equipment was selected. The County and participating cities funded the container purchase, and containers were delivered by City and County intern staff in late August.

In retrospect, the kitchen containers should have been used as a tool for program roll-out. More residents would have become aware of the pilot if they had received a physical item in addition to the program brochure. That, in turn, would likely have created more of a “buzz” about the program and elicited more initial (and hopefully sustained) participation. The initial distribution of kitchen containers would have also created a clearer distinction for residents between the pilot areas and non-pilot areas. This would have better addressed the possibility that residents in areas outside of the pilot area would inadvertently participate and thus “contaminate” their yard debris with unacceptable foodwaste. The distinction of the kitchen container would allow wider promotion of the pilot without needing to mute the message in order to ensure that only pilot area households were aware of the program.

After kitchen container distribution, no additional pilot area promotion was performed other than periodic newsletters mailed to the pilot area participants. This has allowed a reasonable measure of the level of natural interest in organics diversion and the degree of participation likely to be expected if expanded organics collection is incorporated into existing yard debris programs without extensive promotion, economic incentives, disposal restrictions or other supporting policies.

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[3] foodrecycling@zerowaste.com

[4] the same container used by San Francisco’s organics collection program

2.2 Interim Results

The design of the pilot included the development of a tracking spreadsheet, corrected for background variations in weather (which affect yard debris generation) and citywide generation patterns, to compare the pilot area with the previous year. Regarding changes, Kirkland generation patterns in particular were expected to change significantly due to major service changes independent of the foodwaste pilot. The tracking spreadsheet is based on the amount of organics and garbage collected, calculated in pounds per household per month. The spreadsheet was intended to gauge the performance of the pilots as well as calculate the net tipping fee savings generated by diverting organics from the disposed stream to the composted stream. This method was intended to "true-up" the hauler's costs and savings due to the pilot.

One of the pilot area criteria was to ascertain which routes had not varied from year-to-year, in order to make comparisons of data from 2000 and 2001. This proved to be a very difficult task, since both haulers had recently undergone management changes and had overhauled routes in all cities. In addition, garbage and yard debris routes rarely overlapped, so it was doubly difficult to isolate both the garbage and yard debris impacts of the pilots.

In practice, tracking pilot performance based on these measures was problematic. Natural variations in garbage and yard debris generation tended to overshadow changes due to pilot activities, particularly in weekly cities with modest participation levels. Route-based tracking did not appear to provide a level of accuracy that clearly determined pilot area performance. Nevertheless, the data indicated that there was clearly an increase in organics collection, corrected for background variations, in Issaquah, Redmond and Lake Forest Park. The pilot areas in those three cities appear to have diverted an average of 12.0, 12.9 and 31.3 pounds per household of foodwaste, respectively, during the first nine months of the pilots. The Kirkland pilot data indicated a negative amount of foodwaste collected, due to the unrealistically high amount of yard debris collection reported for 2001. Thus, the Kirkland results are unreliable without additional work to correct reporting errors for the route in 2001.

Similarly, participation counts based on visual observation were obviously inadequate, based on the route monitoring conducted during the initial months of the pilot. Since the pilot instructions encouraged residents to "bury" their foodwaste in their yard debris carts, visual evidence of participation was

very hard to spot during collection. Residents who used large milk or juice cartons to contain their foodwaste provided a more visual clue of participation. Likewise, residents recycling large amounts of soiled paper were relatively easy to spot. Participants were otherwise very hard to identify because foodwaste tended to blend in with the larger quantity of yard debris recycled during the Spring and Summer yard debris generation seasons.

A more qualitative method of program evaluation was conducted in late 2002. A focus group was convened to gain feedback on residents' experience with the program and their identification of barriers to increased participation. The weekly collection cities' focus group is discussed in detail in Section 2.2.2.

As a result of the aforementioned difficulties, alternative methods for evaluating pilot performance will be implemented in 2003 as discussed in Sections 2.3 and 5.2.

2.2.1 Collection Data

Yard debris generation varies considerably from year to year in Western Washington. As a result, some thought had to be given to how to isolate pilot area foodwaste quantities from the normal annual variation in yard debris generation due to wet and dry years. This was done by developing a tracking spreadsheet for each pilot area which:

1. Compared citywide 2001 and 2002 yard debris collection quantities to determine a multiplier (coefficient) to apply to the pilot yard debris data.

2. Compared 2001 and 2002 garbage collection quantities to determine a coefficient to apply to the pilot garbage data. This was intended to isolate variations in background garbage generation due to factors unrelated to the pilot (e.g. Kirkland's shift from flat to variable rates and to a new recycling program).

3. Compared pilot area garbage and yard debris collection quantities between 2001 and 2002 to determine how the pilot area patterns varied from citywide averages.

4. Used the previous three data sets to infer the proportion of foodwaste and yard debris in the combined organics mix collected in the pilot areas.

Tracking spreadsheets were completed monthly by Waste Management and Eastside Disposal staff for their respective pilot areas, based on their historical and current pilot route data. Appendix

H contains the tracking spreadsheets for the three weekly pilot areas and Lake Forest Park.

This approach to pilot evaluation was not entirely successful, although interesting results were obtained for three of the cities – Issaquah, Redmond and Lake Forest Park. Since both haulers had recently undergone management changes, each had restructured many of their routes. This made 2001 to 2002 comparisons very difficult, since most routes had changed. Additionally, garbage and yard debris routes do not typically overlap, which reduced our ability to make comparisons between yard debris/organics recovery and similar reductions in garbage generation. In practice, the impact of seasonal variations and inconsistencies in route data were likely more significant than foodwaste recovery quantities.

Table 3 provides a summary of the tracking data for the weekly cities. All quantities are the nine-month averages in terms of pounds per household per month. As can be seen for the original tracking spreadsheets in Appendix H, results in both Kirkland and Issaquah were inconclusive. In those cities, pilot route combined foodwaste, soiled paper and yard debris quantities were lower than would have been expected for yard debris alone. Since the foodwaste collection quantities could not have been negative, we have assumed that the internal route data inconsistencies have overshadowed the relatively small amount of foodwaste actually collected.

Redmond's foodwaste recovery was estimated at 12.9 pounds per household per month, which is what was expected based on other pilots and full-scale programs. However, we cannot necessarily determine that this recovery level is real, as opposed to a coincidence, based on problems on tracking data for Kirkland and Issaquah.

Table 3 – Weekly City Pilot Collection Data
(pounds per household per month)

	April-December 2001		**April-December 2002**	
KIRKLAND	**Citywide**	**Pilot Route**	**Citywide**	**Pilot Route**
Garbage	163.6	175.0	146.1	146.2
Yard Debris	109.4	185.5	122.1	134.2
Foodwaste+ Soiled paper	0	0	0	?
ISSAQUAH	**Citywide**	**Pilot Route**	**Citywide**	**Pilot Route**
Garbage	103.4	91.0	122.4	86.2
Yard Debris	93.8	72.7	86.1	78.7
Foodwaste+ Soiled paper	0	0	0	12.0
REDMOND	**Citywide**	**Pilot Route**	**Citywide**	**Pilot Route**
Garbage	140.2	135.5	134.3	119.5
Yard Debris	119.8	127.9	127.2	131.8
Foodwaste+ Soiled paper	0	0	0	12.9

Although the tracking data comparisons between 2001 and 2002 do not appear to be useful, comparisons between 2002 and 2003 data will be more valid since no route changes have occurred since the pilots began.

Additionally, alternative methods of diversion monitoring should be used to confirm the route level data reported by the haulers, as is discussed in Section 2.3.

2.2.2 Focus Group

On December 3, 2002, a focus group convened, with residents from the three weekly collection cities. A cross section of participants was chosen, with four chosen from each of the weekly cities. Most had children living at home. One of the focus group selection criteria was participation in the pilot program, because the purpose of the group was to get directed feedback on how the program worked in their households. Thus, non-participants were not represented in this focus group.

The focus group was conducted in Kirkland by Carolyn Browne Associates. The full focus group report for the weekly cities is provided as Appendix F to this report.

Findings included:

Major problems cited by the participants:

- Learning how to properly sort the food waste and knowing which paper products belonged with the food recyclables
- Minimizing odors and mess
- Having an appropriately sized container for use in the kitchen
- Creating a system that would work for all families, yet do so with the understanding that each family is unique
- Understanding how the food waste is recycled and how the resulting compost is used

Improvements suggested by participants:

- Educating people about the program’s benefits, which may not be known; informing people how recycled food materials will be used and how the program fits within the context of the recycling ethic

- Implementing an incentive or reward for those who participate, such as: garbage credits that lower pick-up fees (based on pounds per week per month); or restructuring fees to benefit those who recycle more

- Providing more container options to fit the needs of different households

- Providing weekly pick-up all year for those who participate in the program

- Providing more promotion and marketing of the program and its benefits

An appropriate name for the program

In an attempt to educate participants to understand that soiled paper products are a critically important waste to recycle along with food, the project team experimented with a new name "Compostable Recycling." Participants in the focus group were asked to specifically offer comment on this term and there was consensus that the title was misleading or confusing. Nearly all members of the group agreed that the program should not be called this and proposed:

- "Kitchen Waste Recycling"

- "Food Recyclables"

2.3 Weekly Collection Model Pilot Recommendations for 2003

Recommendations for the weekly pilot areas include:

- **Continue the existing pilot areas without expansion.** Kirkland and Redmond are rebidding their collection contracts during 2003. This will occupy staff time, reducing the amount of time available to incorporate additional pilot areas. The rebidding process will incorporate an option for city-wide organics collection. Issaquah, the remaining weekly collection city, already has collection on one full route that represents a cross section of City residents. Little additional data would be gained at this point by immediately adding another route.

- **Develop alternative diversion tracking methods.** The existing route-based tracking system will be continued with support from a can-weighing sampling program. Garbage and organics containers will be tracked in pilot and non-pilot control areas for four consecutive weeks each quarter.

This will provide direct data on how organics (or yard waste) and garbage quantities vary between comparable pilot and non-pilot areas.

- **Monitor participation.** Although inexact, additional visual monitoring of the collected organics stream will be periodically conducted to estimate the percentage of households placing foodwaste and soiled paper in their yard debris containers. The monitoring will be conducted by intern staff riding in collection vehicles on a quarterly basis.

- **Address residents without yard debris.** Some residents without yard debris (e.g. condominium owners or those with yard service) expressed an interest in participating in the pilot. Since the pilot is based on mixing yard debris and foodwastes, the pilot system is not designed to accommodate separate foodwaste collection. Some thought should be given to testing the adequacy of separate soiled paper/foodwaste collection in animal-proof containers, as is being done in Toronto, Ontario. Depending on the level of interest on the part of the City and hauler, this may be done later in Spring 2003 in the City of Issaquah, which has a number of townhouses on their existing pilot route.

- **Weekly city composition analysis.** One sorting run of garbage and organics (similar to the analyses conducted in late 2002 for Lake Forest Park) will be conducted in the early Fall in one or more weekly cities.

- **Determine composting parameters.** The composting facility used by both collection contractors will test composting system alternatives for higher levels of foodwaste in order to address Health Department concerns. These tests will include the application of an alternative in-vessel composting system as well as testing various levels of foodwaste mixed with yardwaste. The facility will import commercial foodwaste loads to test various mixes during 2003, as well as continuing to handle the materials collected by WMI and Eastside Disposal in the pilot areas.

3. Lake Forest Park Pilot Program

The 2002 Lake Forest Park pilot was based on alternating garbage and organics collection on successive weeks. Organics were collected in aerated carts every-other-week and garbage was collected in existing containers on the following week. This eliminated the need for the existing yard debris collection

route, since a single packer would be able to collect both the garbage and organics streams on different weeks.

This system was expected to cost less than existing separate routes for garbage, recycling and yard debris and to result in rate reductions over time, depending on the degree to which those savings could be recaptured through existing collection contracts.

The key of every-other-week collection of organics is the use of an aerated cart because waste materials sit longer and their degradation on site contributes to increased odor generation. Aeration allows oxygen to enter the waste containers and reduce odor impacts. Aerated carts typically have subfloors with a leachate collection area, fluted sides that act like chimneys to increase air circulation, and screened tops with a rain cover to encourage aeration. All major cart manufactures (including Rubbermaid, Rehrig-Pacific, and Schaefer) make at least one version of aerated or semi-aerated cart, with Schaefer capturing most of the market for every-other-week organics collection programs. Schaeffer Compostainers were leased for use in the 2002 Lake Forest Park pilot.

All participants within the every-other-week collection pilot area were provided with a 60-gallon aerated cart for the pilot duration. Existing yard debris carts were not used as the primary organics container during the pilot. Residents were instructed to either use their existing yard debris carts for extra yard debris during the course of the pilot program or store the cart until the pilot is complete.

3.1 Implementation

Two notification letters were mailed to pilot area residents, one each in the two months preceding the pilot start date of May 1, 2002. The first letter established a pilot start date of April 1, 2002 (in sync with the other weekly city pilots). However, delays in obtaining final authorization from the City Council, in developing the pilot brochures and supporting materials, and in obtaining the Compostainer carts required a shift in the pilot start date. A follow-up letter was mailed late March, establishing the May start date.

During the last week of April and the first few days of May, Eastside Disposal delivered the Compostainers to pilot area households. The Compostainers included a kitchen container and a program brochure. As with the weekly collection pilots' households, phone, e-mail and webpage contact information was provided to address residents' questions.

There were 15-20 residents who strongly objected to the pilot and demanded that they receive weekly garbage collection. Those calls were routed to the City, and the city project manager discussed the pilot program in attempts to encourage those residents to at least try the pilot. However, some residents insisted on retaining weekly garbage collection, which was then provided. By the end of the year, 14 households had opted-out of the pilot and were receiving weekly garbage collection. Those residents were instructed to place all their garbage in plastic bags, placed in their regular garbage container. During the first few months of the program, the opt-out resident's garbage was collected in either a pick-up or service truck instead of a regular packer truck to reduce confusion over the alternating week collection schedule. Later in the pilot, Eastside Disposal shifted to collecting the opt-outs in a mini-packer. Interestingly, the opt-outs tended to cluster geographically, perhaps from neighbors letting each other know that complaining about the program might allow them to opt-out and receive weekly garbage collection. Having to service the opt-outs on a weekly basis eliminated most of the route cost savings of the alternating every-other-week collection model and would need to be addressed before permanently implementing the program.

The first organics collection was May 15th, 2002. During the first two months of the pilot, consultant staff provided route support on organics collection days, including being available to deal with contaminated materials, delivering additional containers and collecting garbage from residents opting out of the program. After the first two months, Eastside Disposal assumed responsibility for all customer service functions.

3.2 Interim Results

The Lake Forest Park pilot had the highest participation and diversion rates among the four pilot cities. This was likely due to the semi-mandatory nature of the program. If residents did not participate, they would need to store two weeks of garbage before collection, whereas if they participated, they were ensured of having a minimum of weekly collection for all putrescibles (if they placed their foodwaste in the garbage during their garbage week). Although only 5% of the pilot area residents opted-out of the program, not all the remaining 95% may have actually participated in the pilot. Some residents may have placed all their foodwaste in their garbage in order to adapt to the every-other-week collection cycle without changing their practice of putting their foodwaste in the garbage can, while others may have participated at varying levels.

The every-other-week pilot did not provide clear cost savings due to the need to collect "opt-outs" on the off weeks. Under full scale implementation "opt-outs" would either be disallowed or

provided weekly service at a premium rate that reflected the costs of running the separate weekly route. Under this scenario, the large majority of customers remaining on every-other-week service would likely experience a rate reduction, while the few "opt-out" customers would experience a rate increase.

3.2.1 Collection Data

The same tracking data was compiled for the Lake Forest Park pilot as was described for the weekly cities under Section 2.2.1. In the case of Lake Forest Park, the much higher apparent participation levels (due to the alternating week collection schedule) provided better data and reduced the significance of other factors affecting the collection data.

The combined yard debris and foodwaste quantities are clearly higher than yard debris alone, totaling a monthly average of 83.3 pounds per household, of which 52.2 pounds are inferred to be yard debris and 31.1 pounds are inferred to be foodwaste. Garbage collection quantities declined an average of 19 pounds per month per household. The difference between the 19 pounds per month garbage reduction and the 31.1 pounds per month of apparent foodwaste diversion may be due to increased garbage generation, a relaxed policy on garbage extras, some level of redirecting foodwaste from in-sink disposals or backyard composting, or simply sampling variation in the estimates of the split between yard waste and foodwaste in the total weight of organic materials collected. One might expect differences due to the first two possible causes to decline over time as people adjust to the new system and disposal of accumulated "extras."

Table 4 – Lake Forest Park City Pilot Collection Data (pounds per household per month)

	May-December 2001		May-December 2002	
	Citywide	Pilot Route	Citywide	Pilot Route
Garbage	117.8	118.7	116.6	99.7
Yard **Debris**	64.5	43.1	78	52.2
Foodwaste+ Soiled paper	0	0	0	31.1

3.2.2 Composition Analyses

Two composition analyses were conducted for the Lake Forest Park pilot. A comparative sort of garbage from 31 pilot area households and 32 non-pilot households was conducted on October 9, 2002, and a sort of a portion of the mixed organics load collected from the pilot area was conducted on October 17th. Both sorts were performed by Green Solutions using hired temporary crews.

The objective of the garbage sort was to determine how the composition of disposed waste varied between pilot and non-pilot areas, with a particular focus on how much kitchen waste was captured by the collection program. Accordingly, the sorting categories were defined to focus on kitchen organics rather than the full range of materials typically covered by waste composition analyses. Eastside Disposal collected materials separately from the 31 pilot area households and the 32 non-pilot households and delivered each load to King County's First Northeast Transfer Station, where Green Solutions performed the sort.

The objective of the organics sort was to determine the relative proportion of foodwaste, soiled paper, yard debris and contaminants present in the pilot area organics stream. After the load was delivered to the Cedar Grove Composting facility, a representative sample was separated and sorted into the same categories used for the garbage sort.

The full report is provided as Appendix E.

Key findings from the report include:

- Comparisons of garbage composition from the pilot area and non-pilot area show that the pilot project has led to a significant reduction of disposed foodwaste.

- The results of samples taken from the organics stream in the pilot area confirm that foodwaste and compostable paper are being diverted from the waste stream.

- Curiously, the amounts of other wastes, including kitchen garbage, recyclable containers, recyclable paper and other household garbage, were higher in the load of garbage from the pilot area[5]. The amount of foodwaste found in both pilot area and non-pilot area garbage samples, on a percentage basis, is significantly higher than the amount of foodwaste typically found in garbage according to recent waste composition data for single-family homes in King County. On a per capita basis, however, the difference is not as great, leading to the possible conclusion that this area is performing somewhat better than average on diverting other materials in the first place. In other words, as greater

[5] The analysis had no controls on potential variables that would cause total garbage quantity to differ – e.g., household size and income. Pure random variation would make it almost impossible for the average weight of garbage per household from the two samples to be the same (In other words, it's a certainty that one sample average would be higher than the other). The question for ruling out random variation is whether the higher variable was significantly higher in the statistical sense.

amounts of recyclable materials such as cans and bottles are diverted, the greater the apparent percentage of remaining materials. However, the small sample size increases the possibility of error and random variation clouding the results, so this result should be viewed with caution.

Table 5 provides a summary of the composition of the garbage and organics samples by sorting category.

Table 5 – Composition of Samples, Percent by Weight

Material Category	Pilot Area		Non-Pilot Area
	Organics	Garbage	
Yard Debris	85.5%	2.2%	0.1%
Foodwaste	6.6	25.1	38.7
Compostable Paper	6.5	5.8	7.9
Kitchen Garbage	0.0	6.2	4.0
Recyclable Containers	0.02	7.1	4.2
Recyclable Paper	0.3	12.2	11.0
Other Household Garbage	1.1	35.5	24.6
Other	0.0	6.1	9.3
TOTAL	**100.0%**	**100.0%**	**100.0%**

Table 6 provides a summary of the garbage and organics generation rates observed from the sorted samples.

Table 6 – Results, Pounds per Household per Week

Material Category	Pilot Area, Organics[1]	Pilot Area, Garbage	Non-Pilot Area, Garbage	Average for King County[2]
Yard Debris	13.9	0.5	0.03	1.4 (0.9 - 1.9)
Food Waste	1.1	5.8	8.9	6.5 (6.0 - 7.0)
Compostable Paper	1.1	1.3	1.8	NA[3]
Kitchen Garbage	0.0	1.4	0.9	NA
Recyclable Containers	0.0	1.6	1.0	1.7 (1.4 -1.9)
Recyclable Paper	0.0	2.8	2.5	NA
Other Household Garbage	0.2	8.1	5.7	NA
Other	0.0	1.4	2.1	NA
Total	**16.3**	**23.1**	**23.0**	**27.2**

Notes: 1. Per-capita rates have been calculated based on weight of the organics load and the total number of households in the pilot area (296 households), including non-participants.

2. Average values for King County have been derived from the final report for the Waste Monitoring Program (Cascadia 2000) with additional analyses by King County staff and Green Solutions to derive per-capita figures.

3. NA = Not Available, direct comparison of some of the categories used for this project versus categories from the Waste Composition Study are not possible due to differences in definitions and sorting methods.

3.2.3 Survey

In July 2002, residents within the pilot program area of the City of Lake Forest Park were mailed a Food Recycling program newsletter containing a letter from the Mayor of Lake Forest Park, a program update, question and answer section, helpful tips, reminder of acceptable and non-acceptable items and a survey.

Goals of the survey were to evaluate the effectiveness of outreach and education methods employed prior to commencement of the pilot to inform residents of the program and to explain the importance of food recycling, goals of the program and how the program would work. The survey also sought to obtain resident feedback on the functionality of the Compostainers, participation rates, understanding of the program, observed decreases in garbage volume, and factors that reduced and increased willingness to participate. Additionally, the survey was deliberately sent during summer so as to obtain feedback during the hottest months when it was expected that some concerns would be greatest.

The full survey report is provided as Appendix D. Survey results include:

- 73 respondents out of 296 pilot area households completed the survey, a return rate of 25%
- 82% reported that program instructions were clear
- “Managing food wastes in the kitchen” was reported as the largest barrier to participation, at 34%; however, 86% reported using their Compostainer, with 85% reporting that they place food wastes in their Compostainer
- Residents appear to understand the concept of mixing materials to reduce odors - only 4% reported placing food waste only in their Compostainer
- 78% reported the Compostainer’s functionality to be the same, better or excellent compared to their existing yard waste containers
- 59% reported noticing a decrease in their garbage volume
- The major “dislikes” were reported as “smell / mess / flies,” at 27%, and “reduced garbage pickup,” at 21%, but many respondents who reported these dislikes also reported program “likes”

- 50% reported program advantages. The “like” most often reported was “expanded recycling / reduced garbage / less material to landfill,” at 34%.

The survey from included space for respondents to provide suggestions or comments. Most suggestions were related to variations to the pick up schedule and to pricing structures for future programs

3.2.4 Focus Group

On October 29, 2002, a focus group was held with residents from the Lake Forest Park pilot area. A cross section of pilot area residents was chosen including both participants and non-participants. Half of the focus group members had children living at home. The focus group was conducted in Lake Forest Park by Carolyn Browne Associates. The full focus group report for the weekly cities is provided as Appendix G to this report.

Findings included:

Major Advantages:

- Educational materials instructing what materials were to go into the container
- Having a way to recycle foodwaste and soiled paper products
- Extra yard waste disposal

Major problems cited by the participants:

- Dissatisfaction with every-other-week pickup of garbage because of too much material
- Problems with odors and flies
- Perceived inconvenience of having to sort out the items to be recycled
- Program perceived as unnecessary because of little foodwaste generation or existing alternatives

Improvements suggested by participants:

- Implementation of an incentive or reward for those who participate

- Alternatives to the kitchen container, such as a milk carton or wrapping foodwaste in paper

- Education about how recycled food materials will be used

3.3 Every-Other-Week Collection Model Pilot Recommendations for 2003

Recommendations for the Lake Forest Park pilot area include:

- **Expand the pilot area to include the entire Wednesday route.** The initial 2002 pilot covered approximately half of Eastside Disposal's Wednesday route. This created operational difficulties for Eastside Disposal, since they had to cover the pilot and non-pilot remainder of the route separately. Extending the pilot to cover the entire area will ease their operations as well as allow a broader sample size.

- **Shift to weekly collection of organics.** While every-other-week collection appears to work without difficulty, the infrequency of collection may be a barrier to some residents due to negative perceptions of foodwaste "rotting," or lack of understanding or interest in bulking out foodwaste material in their organics cart with yard debris or soiled paper. Shifting to weekly organics collection would be a higher level of service than currently offered in either the pilot or non-pilot areas of Lake Forest Park.

- **Retain every-other-week garbage collection.** Garbage collection remained every-other-week in the 2002 pilot area and will be expanded to the remainder of the route in March 2003. Every-other-week garbage collection provides an incentive to residents to participate in the weekly organics program as well as reduces the costs and environmental impacts of collecting largely non-putrescible garbage weekly.

- **Increase garbage collection container size and test automated collection.** During the 2002 pilot, residents were asked to place two weeks worth of garbage in their existing

garbage container on the assumption that diverting organics would reduce garbage by half. Additional garbage cans were provided to households on request. For the 2003 pilot, all households will be provided with a garbage cart of roughly twice the capacity of their weekly service levels (e.g. a customer at a single 32-gallon service level will receive a 64-gallon cart). Once all households have garbage carts, Eastside Disposal will test automated garbage and organics collection.

- **Develop alternative diversion tracking methods.** The existing route-based tracking system will be continued with support from a can-weighing sampling program. Garbage and organics containers will be tracked in pilot and non-pilot control areas for four consecutive weeks each quarter. This will provide direct data on how organics (and/or yard waste) and garbage quantities vary between comparable pilot and non-pilot areas.

4. Composting

All pilot material was delivered to the Cedar Grove Composting facility in Maple Valley. Both haulers were previously directing the pilot city yard debris to Cedar Grove, so the mixed organics from the pilot areas were handled under the haulers' existing contracts with Cedar Grove. See Appendix J for a discussion of the composting process.

Results

All pilot materials were successfully composted consistent with the compost plan presented to the Health Department prior to starting the pilots. The finished material was marketed with Cedar Grove's other compost products. Contrary to expectations, there has been almost no contamination in the collected organics mix, with levels experienced close to the background contaminant level of regular yard debris. All materials were processed to meet pathogen reduction requirements with no adverse impacts or corrective measures required.

Due to the very high yard debris generation rate in the pilot cities, the foodwaste component was proportionately low, even in the Lake Forest Park loads. Few, if any, changes in the composting process were necessary to handle the yard debris/soiled paper/foodwaste mix.

5. 2003 and Beyond

5.1 Comparisons with Other Programs

At the end of 2002 and early 2003, Meucci Consulting surveyed other known North American organics collection programs to determine current status, to review promotional strategies and design, and to develop recommendations on how to increase participation in the King County pilots. A copy of that survey is provided in Appendix I to this report.

Program Set-up

Based on the interviews and information found on corresponding websites, the most successful food scrap recycling programs are those using a wheeled cart and kitchen pail with a lid and handle (with or without a liner). These programs offer weekly collection of yard waste, soiled paper products and food scraps.

Liners are preferred by participants when asked about them, but do not seem to make a difference in overall participation rates. If given the choice, participants would choose to have liners. Most communities provided some type of liner as part of a pilot program to see if it made any difference in participation or diversion rates, but few have provided them when the program went community-wide. Instead, most have opted to make liners available for purchase either through local retail outlets or by phone order and provided alternative ideas (reusing paper grocery sacks, wrapping with newspaper, freezing, etc.) for keeping the pail clean without the use of a liner. Offering two sizes of containers (pails especially) was suggested by several communities as a way to make the program more attractive to some customers. However, the majority of communities offer just one size and no major problems have been reported. Suggestions for participants who did not want to use a pail included conveying to people that use of the pail is optional and suggesting alternative containers (i.e. empty milk cartons).

Fall (mid-to-late October) and spring (March or April, preferably after school spring breaks) are the most popular times to launch programs. They are prior to extreme weather months and do not conflict with major holidays or school breaks. After initial start-up promotions, most programs directly contact participants on a monthly or quarterly basis. Ideal contact seems to be monthly in some form (indirect on a monthly basis, direct on at least a quarterly basis).

Outreach Methods and Materials

Education and promotion efforts were identified as the single biggest determining factor in the overall success of a program. Program managers interviewed were emphatic about the importance of starting promotions early (one month prior to start date at a minimum), planning for broad-based promotions, and budgeting to provide on-going education and promotion efforts. The single biggest regret most program managers had was not starting outreach early enough and not doing enough of it.

Some communities hosted information meetings or open houses prior to the start. Most experienced low turnout and would not recommend them unless they were required. An alternative would be to participate at an existing event that many residents would already be attending (school fair, farmer's market, etc.) In general, other program managers suggested directly addressing participants with the message; don't expect them to come to you.

Most communities used direct mail to participants at the start, but then relied primarily on media attention and other indirect methods of contact for long-term promotions. On-going, regular contact was mentioned frequently as important in a program's success. Most program managers said they would increase the frequency of contacts a participant has with the program – especially after the initial start. Some programs have seen a slight decline in participation after the initial start. The cause is unclear. A natural seasonal flux, seasonal changes in living habits (i.e. travel/dining out more) or changes in attitude were all suggested as possible reasons.

Monthly contact in some form seems to be the minimum that most program managers think participants need. This contact can be minor and could come from a variety of sources – postering, community events, newsletters (business, chamber, non-profits, government), media attention, signage (bus, truck, billboard, etc.) or public speaking/presentations. Press releases can be issued at specific program milestones: when certain participation and diversion rates have been achieved; when new materials are added to any part of the recycling program; when landmark tonnages have been reached; or when the first batch of compost is sold, bagged or goes to market. Use any new announcement about anything garbage or recycling-related as a time to further promote the program.

The majority of communities have taken a fact-based, simple approach when designing their educational materials (versus cartoon-type or humorous). Most have used straightforward titles and wording ("Food Scrap Recycling" has been most popular). Communities who developed single color, "copier" quality materials were disappointed with the look and would spend the extra time and money upgrading the materials in the future. Text has been a challenge for many program managers, especially

balancing the desire to give detailed info on acceptable and non-acceptable materials versus being too specific or wordy and ending up with cluttered pieces. Most program managers said the goal is to provide simple, easy-to-follow instructions with clear, visual graphics. Several contacts mentioned the importance of including the benefits of participating (financial, environmental, civic) in educational materials, providing incentives for participation (variable can rates, discounted compost, random prizes, etc.) and getting the support of local politicians, media and haulers.

Most communities printed materials in English only. San Francisco has multiple language issues to consider so they moved toward mostly graphic print pieces, but continue to print each piece in three languages (English, Spanish and Chinese). Toronto chose instead to print several versions of each piece (English, French and Braille).

At a minimum, the following outreach materials for each household were most common:

- **Toter/cart label** (including program name/logo, hauler name, phone number, website address and list of general materials accepted).

- **Pail label** (listing acceptable/not acceptable items, program name/logo, phone number and website address).

- **Instruction brochure or flyer** appealing enough to post or keep for future reference. Contents should include: overview of program, list of acceptable/not acceptable items, plenty of graphics or photos of containers and acceptable items, sponsor and contact info, summary of benefits of participating, incentives, and a brief description of what compost is, how it is made and why it is important for the individual, community and environment.

- **Toter/cart hang tag or doorhanger** introducing the program (optional, but could be used during delivery as a way to introduce program).

- **Toter/cart hang tag** for problems (a checklist-style tag for drivers to leave behind if there are any contamination or collection issues).

- **Collection calendar** listing collections for the coming year. Provided once a year via mail, website and/or email.

- **Hotline or other reliable phone contact** (some communities have established a "Rotline.")

- **Website with updated info** (a valuable tool, easy-to-update and available to participants 24 hours a day.) All program materials (brochures, flyers, letters, calendars, etc.) should be made available on this site.
- **Communication:** The most successful programs made the most of media communications, issuing press releases on a regular basis and setting up media photo opportunities. Several communities use the following schedule for media contact (issuing press releases, meeting with editorial boards, setting up photo opportunities, etc.)

No program interviewed as part of this report targets materials to a specific person in a household. In addition, the general materials used provide most participants with enough info on how to set up the program inside their homes. If not, most questions are resolved via a phone conversation with the participant.

Data Collection/Program Monitoring

Very few communities are doing detailed data collection beyond monitoring participation rates and diversion rates. In some programs, drivers have counters and participation rates are derived from those numbers. In other programs, staff goes out ahead of a collection truck, counts the number of carts set out and lifts the lid to do a visual check for food scraps. No poking is allowed. If no food scraps are seen, the cart is not counted. This type of monitoring can occur quarterly or semi-annually. It seems to occur more frequently at the start of a program and then tapers off as the program becomes more established. Typical participation rates ranged from 25%-40%. Diversion rates were around 30%.

None of the surveyed programs are performance testing any promotional materials per se, nor do any have plans to in the future. Several communities have asked questions about recall and retention of specific educational information during phone surveys or opinions on usefulness of various methods (for example, which method a person would prefer—door-to-door campaign versus a newsletter).

Program Challenges

Overall, no communities were experiencing serious problems with their programs. Challenges were typical and fixable. The "ick" factor (odors and pests), no time, and already home composting were major reasons for not participating. For people that called or contacted staff with complaints or questions, most were about

smell, storage issues (where to put the cart) or a request for liners or liner alternatives.

5.2 2003 Plan for Pilot

Weekly Cities (Issaquah, Kirkland, Redmond)

In the three cities with weekly collection, we intend to continue the status quo and will not expand any of the service areas at this time. There will be no changes in garbage or yard debris collection frequency. We will continue with the existing route boundaries and intensify promotion and education to increase participation and organics capture levels. We also expect to experiment with containerization options to better accommodate those residents who do not use yard debris services but wish to recycle kitchen organics.

Lake Forest Park

In Lake Forest Park we intend to implement significant changes to the program, in response to customer feedback. Instead of the existing every-other-week alternating garbage and organics collection schedule, we will be shifting to weekly organics collection and continuing every-other-week garbage collection, starting **March 1st**. This is the system the City of Toronto implements. To provide additional garbage collection capacity, we will be shifting from customer-owned garbage cans to universal distribution of contractor-owned wheeled carts, sized to approximately twice the customer's weekly ("pre-pilot") service level. Eastside Disposal has requested to employ the pilot across the entire 625 household route rather than continuing with the current fragmented pilot route. Expanding the route will allow us to test the 2003 Lake Forest Park pilot in areas which have not previously experienced reduced frequency garbage collection. This will provide us additional information on the feasibility of this approach and the comparative participation between the 2002 and 2003 pilots.

Composting

Cedar Grove will continue to accept the combined yard debris, foodwaste and soiled paper from the collection contractors. It is our understanding that they will be testing the impact of both increased levels of foodwaste in their yard waste mix and source-separated commercial food waste composting, as well as testing alternative in-vessel technologies.

Promotion and Outreach

Promotion will be stepped up in the program to more frequent mailings then were sent in 2002. Pieces will include regular newsletters and postcards with educational information such as "how to's", "do's" and "don'ts," suggestions on kitchen management, and facts about composting, recycling, etc.

The program name will also be changed to "Food Recycling" to better reflect the emphasis on both food and soiled paper.

Pilot Monitoring

Pilot monitoring will be expanded in 2003 to include four components:

1. **Can weight monitoring**: Sample garbage and yard debris containers will be weighed in two cities to determine actual diversion performance for control versus pilot area households. The weight monitoring will be performed in February, May, August and November. A total of 160-200 households will be tracked.

2. **On-route monitoring**: The routes in one or two cities will be periodically monitored several times during the year to track participation counts, participation patterns, contamination items and levels, and other route data.

3. **Composition Analyses**: Several composition analyses will be conducted on both the organics and garbage streams as was done last year in Lake Forest Park. These will likely focus on one of the weekly cities for 2003.

4. **Survey**: Either another focus group or phone survey will be conducted later in the year to gain additional data on participation attitudes, habits, and barriers, as well as testing the response to our 2003 promotion program and the selected program identity.

5.3 Future Diversion Potential

Although foodwaste and soiled paper represents about 30% of the single family disposed wastestream in King County, the diversion potential of this material is limited by participation rates. Under virtually all likely implementation scenarios, participation in foodwaste and soiled paper programs is expected to be significantly below corresponding recycling participation rates. This is probably due to a combination of barriers ranging from the "ick" factor, kitchen space constraints, and unwillingness to spend time and effort to understand a new program and to separate another material out of the household waste stream.

Table 7 provides a summary of the foodwaste and soiled paper diversion for the three eastside pilot cities (plus Bellevue) and Lake Forest Park (all of whom are most likely to seek full scale residential foodwaste collection services in their hauling contracts) under two scenarios: 20% capture and 50% capture. The 20% capture estimate reflects likely near term performance during the initial stages of program implementation. The 50% capture represents the maximum likely performance several years after implementation, assuming widespread availability, education and acceptance. It is worth noting that even at 50% capture the foodwaste and soil paper tonnages are far outweighed by yard debris quantities.

Table 7 – Diversion Potential Under 20% and 50% Capture

	House-holds	SF[6] Garbage Tons[7]	Percentage MWP/FW[8]	SF FW/Pap Tons	20% Tons Diverted	50% Tons Diverted	**Current YW Diverted**
Lake Forest Park	3,781	2,741	30.8%	844	169	422	**569**
Kirkland	10,520	10,003	30.8%	3,081	616	1,540	**6,658**
Redmond	8,870	7,647	30.8%	2,355	471	1,178	**5,528**
Bellevue	25,100	17,245	30.8%	5,311	1,062	2,656	**12,972**
Issaquah	2,585	2,014	30.8%	620	124	310	**992**
Total		39,650		12,212	**2,442**	**6,106**	**26,719**

If all of the eastside cities listed in the table and Lake Forest Park implement full scale organics collection programs citywide, the expected foodwaste and soiled paper tonnage would range from approximately 2,500 to 6,100 tons per year, and equal from 8.4% to 18.6% of the total organics mix received from those cities on an annual basis.

[6] SF=Single Family, which is typically 1-4 dwellings per structure, depending on the respective city's collection contract
[7] All tonnage data from 2000 Hauler Database (contact Beth Humphreys, SWD (206) 296-4365)
[8] KC 1999/2000 Waste Stream Characterization, page 21 ("Food Wastes" + "Other Paper" categories)

APPENDICES:

A: SAMPLE MEMORANDUM OF UNDERSTANDING FOR PILOTS
B: DOORHANGERS
C: NEWSLETTERS
D: SURVEY RESULTS
E: WASTE AND ORGANICS SORT RESULTS, GREEN SOLUTIONS
F: WEEKLY CITY FOCUS GROUP RESULTS, CAROLYN BROWNE ASSOCIATES
G: LAKE FOREST PARK FOCUS GROUP RESULTS, CAROLYN BROWNE ASSOCIATES
H: TRACKING SPREADSHEETS FOR PILOT AREAS
I: RESIDENTIAL FOOD SCRAP COLLECTION AND RECYCLING PROGRAMS, MEUCCI CONSULTING
J: CEDAR GROVE COMPOSTING PROCESS

DRAFT

Appendix A
Memorandum of Understanding

By and Between

King County (" County");
City of Issaquah (" City");
Rabanco Ltd. dba Eastside Disposal (" Eastside"); and
Sound Resource Management Group, Inc. (" SRMG")

1. Preamble and Purpose

In King County, approximately 30-40% of the residential waste stream collected from single family residences is composed of foodwaste, yard debris, soiled paper and other potentially compostable organic materials. The organics component of the residential waste stream offers the highest diversion potential of the currently disposed waste stream. The diversion of additional organics offers a number of advantages beyond the goal of simply diverting waste from landfilling, including: reducing the concentration and toxicity of leachate, reduced landfill gas, and the production of needed beneficial soil amendments.

The King County Solid Waste Division (KCSWD) is implementing four residential organics diversion pilot programs to be conducted in 2002 to test the feasibility of expanded organics diversion. Existing yard debris collection programs will be expanded to include food wastes and soiled papers. Collected materials will be delivered to the Cedargrove Composting facility. One of the selected cities is the City of Issaquah.

The County has retained SRMG as a technical consultant to design, implement and evaluate the pilot programs.

This Memorandum of Understanding (" Agreement") describes the roles and responsibilities for the parties to this Agreement.

2. Term

The pilot period will start April 1, 2002 and end December 31, 2002, unless extended in writing by the mutual consent of all parties and the Seattle/King County Department of Public Health.

3. Service Area

The service area is composed of approximately 500 households within the specified service area, as defined in the map provided as Attachment A to this Agreement.

4. Responsibilities

4.1 Materials to be Collected

All post-consumer foodwaste and uncontaminated soiled paper shall be collected by Eastside when combined and placed in customers' existing yard debris carts. Post-consumer foodwaste includes vegetable trimmings, plate scrapings, spoiled food and other compostable kitchen wastes including meat and dairy products. Post-consumer foodwaste shall not include contaminants such as plastics or liquid wastes. Soiled paper includes used paper napkins, paper towels, tissue and pizza boxes.

4.2 Promotion and Education

The County shall produce all promotional materials, with review and logos provided by City staff. These materials shall include:

- Introductory package of materials (door hanger)
- Follow-up mailings
- Problem tags
- End of pilot mailing

SRMG staff shall arrange for the distribution and delivery of the initial doorhanger during the week of March 25, 2002.

Eastside shall provide to the County, household addresses for the pilot area in either written or, preferably, electronic form as soon as practical to allow the County to compile a pilot program mailing list.

4.3. Customer Phone Support

SRMG shall provide and staff an " Organics Collection Hotline" for the duration of the pilot program. The Hotline will be available to address customer questions and comments from mid-March 2002 through January 2003. The Hotline number will be (206) 352-9565.

4.4 Containers

Existing cans and rented yard debris carts used by customers shall be used for the pilot program. Eastside shall ensure that all containers used on the collection route are in good condition, without holes, broken lids or other defects.

4.5 Technical Assistance

SRMG shall provide overall technical and implementation assistance for the pilot program. This assistance will include, but not be limited to, addressing logistical issues with collection and transfer to the composting site,

contamination issues, addressing customer questions, suggesting pilot improvements, liaison with and between permitting agencies, the City, the County and Eastside.

4.6 Monitoring and Evaluation

SRMG shall provide monitoring and evaluation services, including design of tracking forms, interpreting data and producing interim and final reports. Eastside shall record participation and visual contamination levels as well as providing historical and pilot period garbage, recycling and yard debris/organics collection quantities for the pilot program area.

4.7 Screening for Contamination

Eastside's route driver shall visually screen organics carts prior to and during cart tipping into the collection vehicle. Contamination in excess of 5% shall be cause for rejecting the load. Drivers shall tag rejected loads with specific rejection items identified for customers.

4.8 Contaminated Loads

Carts with obvious visual contamination in excess of 5% shall be tagged and not collected as organics. Carts containing contaminated materials shall be collected as garbage and disposed.

5. Funding and Compensation

5.1 Funding Contribution

The County is the primary sponsor of the collection pilot, through its contract with SRMG. SRMG is responsible for disbursing appropriate projects costs and then seeking reimbursement from the County. SRMG agrees to provide the County with receipts and/or other necessary paperwork to document its project-related costs, as requested by the County.

The City shall contribute ten dollars ($10.00) per household for all pilot area households, for a total of $5,000. This contribution shall comprise the entire project funding responsibility for the City. The contribution shall be paid, upon invoicing, to SRMG at the conclusion of the pilot program. SRMG will apply those City funds to the direct project expenses (e.g. tipping fees) for this pilot program.

5.2 Tipping Fees

Eastside shall be reimbursed monthly for increased organics composting tipping fees according to the following methodology:

A. Confirm the 2001 city-wide and the pilot route average yard debris tonnage per collection customer for the pilot period months;

B. During the pilot period months, track the 2002 city-wide and the pilot route average yard debris tonnage per collection customer;

C. Compare the (A) and (B) city-wide averages (minus the pilot area tonnages) to determine how much " natural" variation there was between 2001 and 2002. Calculate a coefficient to apply to the 2002 pilot area quantities to determine how much yard debris was collected during the pilot period. This calculation is intended to isolate the variability due to annual wet/dry variation.

D. Use the coefficient developed in (C) to calculate how much yard debris tonnage would have been collected in the pilot area in the absence of an expanded organics program.

E. Calculate how much additional that yard debris will cost for disposal due to the higher tipping fee for mixed organics: (D) times the $15 difference between the historical yard debris tipping fee and the $45 mixed organics tipping fee.

F. Calculate the amount of additional organics collected by subtracting (D) from the total pilot tons collected. Multiply those new (" foodwaste") tons by $45/ton.

G. Calculate the reduction in garbage disposal fees by comparing 2001 and 2002 garbage disposal quantities for the pilot area (based on per-household averages) and multiplying the result by the $82.50 King County tipping fee. The comparison of 2001 and 2002 per-household garbage quantities shall use the same comparison methodology described for yard debris in (A) through (D) above, to isolate any underlying shifts in garbage generation unrelated to the pilot program.

H. Total adjustment = (E) + (F) – (G)

SRMG shall develop the waste monitoring spreadsheet used for calculating pilot program wastestream and tipping fee impacts.

The net tipping fee reimbursement shall be calculated and paid monthly. Monthly tracking data shall be provided to SRMG by the 10th of the following month. SRMG shall calculate net tipping fee impacts and shall provide a copy of its calculations by the 15th of the following month. Eastside shall then provide an invoice for the net tipping fee adjustment by the 20th of the month, which shall be paid by SRMG within 10 business days of receipt.

5.3 Other Expenses

Eastside shall be responsible for all of its incidental expenses associated with the pilot program, including but not limited to driver orientation, monitoring and tagging labor, telephone calls to its call center, and data logging. SRMG shall be responsible for all of its project expenses, pursuant to the terms of its contract with the County.

6. Extension of Pilot Program

The pilot program may be extended upon written mutual agreement between participating parties to this Agreement and the Seattle/King County Department of Public Health. The decision to extend the pilot program shall be made by the parties no later than November 30, 2002 to allow sufficient time to provide notice to customers.

7. Demobilization

The County shall mail a letter to all pilot area residents during the month of December 2002, informing those residents that the pilot program is ending. The notification will also provide the initial pilot program results and options for future implementation, and will instruct the residents to either backyard compost appropriate materials or dispose of them in their garbage. Finally, the letter will remind residents that yard debris collection will revert to the winter collection schedule effective January 1, 2003.

8. General Terms and Conditions

8.1 Termination.

The pilot project shall be terminated with 30 days notice by any party to this MOU, provided that all parties shall make reasonable efforts to solve any operational or other difficulties prior to deciding on termination. Reasons for pilot termination shall include, but not be limited to, Department of Public Health requirements, unresolvable problems with contamination, excessive customer complaints or low participation.

8.2 Amendments

This Agreement may be amended only by the written agreement of all parties.

8.3 Severability

If any section, subsection, sentence, clause or phrase of this Agreement is, for any reason, found to be unconstitutional or otherwise invalid by a court of

competent jurisdiction, such decision shall not affect the validity of the remaining portions.

8.4 Notice

Any notice required or permitted under this Agreement shall be deemed sufficiently given or served if sent to the following:

For the County:
Josh Marx, Project Manager
King County DNR Solid Waste Division
201 South Jackson Street, Suite 701
Seattle, WA 98104-3855
(206) 296-4429; FAX (206) 296-4475

For the City:
David Fujimoto, Program Specialist
City of Issaquah Resource Conservation Office
PO Box 1307
Issaquah, WA 98027
(425) 837-3412; FAX (425) ???

For SRMG:
Jeff Brown, Principal
Sound Resource Management Group, Inc.
121 Park Ridge Road
Bellingham, WA 98225
(360) 714-0060; FAX (360) 734-9484

For EASTSIDE
Jeff West, Eastside Division Manager
1600 127th Avenue NE
Bellevue, WA 98005
(425) 646-2496; (425) 646-2440

IN WITNESS WHEREOF, this Agreement has been executed by each party on the date set forth below:

_____ Date:_____
Rod Hansen, Manager, King County Solid Waste Division
King County Solid Waste Division

_____ Date:_____
xxx
City of Issaquah

_____ Date:_____
Jeff Brown, Principal
Sound Resource Management Group, Inc.

_____ Date:_____
Jeff West, Division General Manager
Rabanco Ltd. dba Eastside Disposal

King County

New Food Recycling

Pilot Program **April 1st – Dec 30th 2002**

yes

You and your household can now recycle all your leftoverfood waste and food-soiled paper. Yes, that includes droopy lettuce, meats, bones, moldy cheese and pizza boxes.

Tear off and save!

Paper milk cartons can be used to hold food scraps and are compostable!

New items acceptable in your yardwaste bin during the pilot:

- Fruit and vegetable scraps
- Meat and fish scraps and bones
- All solid food leftovers
- Coffee grounds, filters and tea bags
- Used paper towels and napkins
- Food-soiled cardboard (without plastic or aluminum coatings)
- Cardboard Egg cartons

no

Liquids - Plastics - Diapers
Pet wastes - Ashes
Rocks, Stones or Dirt

More information on back ➔

Your neighborhood has been chosen for the 2002 Food Recycling Pilot Program. You will have the chance to reduce garbage. Plus, food recycling produces compost – a usable product that keeps our environment healthy – naturally!

The City of **Issaquah** and the **King County Solid Waste Division** have partnered to develop a Food Recycling Pilot Program beginning this April. By recycling all organics – food waste, food-soiled paper and yardwaste - less material will be sent to landfill, helping to stabilize future garbage collection costs.

HOW to participate:

- It's easy! Place foodwaste and food-soiled paper in your yardwaste container.
- Ensure your yardwaste container has a tight fitting lid and is pest proof.
- DO NOT set out foodwaste in paper bags only. Foodwaste can be placed in a paper bag but then it must also be placed inside a sturdy, pest proof yard waste container.

WHEN to start:

- APRIL 1st! Every Monday your yardwaste cart will be collected as usual except now you can add foodwaste and food-soiled paper. The Food Recycling Pilot Program will run until December 30th 2002.

Participation is voluntary. You can choose to recycle all your food waste, just your veggies or nothing at all. But, any food waste you do recycle reduces your garbage volume and helps to keep our environment healthy – naturally.

Towards the end of the pilot we would like your feedback. In November we'll follow up with a mail survey.

King County

RABANCO

CITY OF ISSAQUAH Resource Conservation Office

WM WASTE MANAGEMENT

This information is available in alternative formats for individuals with disabilities upon request.

March 2002

Tear off and save!

USEFUL TIPS:

- Use a paper milk carton to collect food waste. The cartons are compostable so, when full, simply throw the whole lot in your yard waste container.

- **To reduce odors:**
  - Sprinkle and intermix foodwastes with yard waste
  - Wrap foodwaste in paper before placing in your yardwaste container
  - If food is really smelly, such as crab shells or poultry, wrap in paper and freeze until collection day
- **To keep your yardwaste container clean:**
  - Hose out and dump water on the lawn
  - Line your yardwaste container with paper or cardboard
  - Rub vinegar on the lid to discourage fruit flies

QUESTIONS?

Food Recycling Hotline:
(206) 352-9565

Email:
foodrecycling@zerowaste.com

Attachment C

New Food Recycling

King County
Department of
Natural Resources and Parks

Food recycling pilot program is running April through December 2002 in selected King County neighborhoods.

June 2002

Printed on recycled paper

Pilot Program Review:

Your Feedback and Suggestions are Wanted!

With passage of the "Waste Not Washington Act" in 1989 we agreed as a community on two very important goals in order to maintain the lifestyles we enjoy here in the beautiful Pacific Northwest: Reduce waste and increase recycling programs. Food recycling is critical to achieving both these goals. Food scraps and food-soiled paper are resources not wastes, therefore it is a waste to landfill them!

We want to provide you with the best curbside garbage and recycling service and we want to meet the waste reduction and recycling goals that are important to all of us. But we can't do these things without input from you. Your feedback and suggestions are critical so please, take a few moments to complete the tear off survey inside this newsletter.

No postage required!

From Mayor Dave

Thank you for participating in this organics collection pilot. This pilot is testing the use of special aerated carts to reduce odors, whether we can accept a wider range of materials for composting and whether garbage volumes are decreased enough to warrant reduced garbage collection frequency.

We are testing this program in a relatively small area so we can directly respond to any issues as they arise and make changes as needed to have a successful pilot.

Through this pilot we hope to:

1. Reduce the amount of waste going to the County's only landfill, and eventually reduce the amount of waste requiring export to out-of-county landfills.
2. Increase the amount of material recycled at local composting facilities.
3. Possibly reduce the number of trucks deployed to collect garbage in our neighborhoods.

We will consider the information gathered in this pilot when we review options for the City's next garbage collection contract.

I appreciate your willingness to participate. I hope you will take the time to fill out the survey included in this newsletter. It is one way we have of evaluating how well the project is working.

David R. Hutchinson
Mayor, Lake Forest Park

"My family was very excited about this pilot program."

What Your Neighbors Are Saying:

"I love [the program]. It makes me feel great that I'm not throwing so much away.

"My family was very excited about this pilot program. We have been working hard to devise a system in our home to effectively collect and contain all of the items and waste for recycling.

"It s worked out great to recycle our food wastes through your program. It has cut our garbage output almost in half!

Why Should I Participate?

Food for Thought...

- Food waste and soiled paper remain the largest component of recoverable material being dumped into landfills. Collecting these materials reduces our need for landfill space and extends the life of existing landfills.
- Collecting food waste and soiled paper reduces landfill gas emissions such as methane.
- Food waste and soiled paper are a resource, not a waste! Food recycling turns these materials into valuable compost and helps the community achieve their goals of reducing waste and increasing recycling programs.

This nine-month pilot program will provide valuable feedback about the viability of the program and will help King County and its City Partners determine what form of food recycling can be initiated county-wide. Resident participation is key to evaluating the effectiveness of the Compostainers, effects of every-other-week collection and reductions in food and paper waste.

Our Partners

The Food Recycling program is a pilot program designed by the King County Solid Waste Division in cooperation with the Seattle/King County Public Health Department, Sound Resource Management Group, Rabanco and Lake Forest Park.

CITY OF LAKE FOREST PARK
INCORPORATED 1961

RABANCO

What Neighbors Are Asking:

Here are a few of the most common questions being raised by your neighbors.

Q. ***Can we still use our existing yard waste carts?***

A. Yes! The Compostainer is your primary receptacle for food and soiled paper. Using layers of yard waste simply helps to reduce odors. Continue using your existing yard waste containers for large quantities of yard waste and extra food waste once your Compostainer is full.

Q. ***Do you have any suggestions on ways to easily collect waste in my kitchen?***

A. Use the smaller Compostainer in your kitchen and line it with newspaper or a paper grocery bag. Every other day you can dump all the contents at once into your outdoor Compostainer. One resident recommended using ice cream or paper milk cartons as small receptacles for children who want to help collect food waste. Once full these can be thrown directly into the Compostainer.

Q. ***I lost my schedule. How can I find out when pick-up is scheduled for food waste?***

A. You can call the Food Recycling hotline at 206-352-9565 to find out which week is scheduled for garbage collection vs. food waste collection. You may also request a package of schedule stickers to be mailed to you.

Q. ***Where can I find information on which materials are recyclable?***

A. Clip the "Yes/No" list included in this newsletter and post on your refrigerator or kitchen message board for a quick reference. For more details, you can

- call the Food Recycling Hotline weekdays from 9 a.m. to 5 p.m. at **206-352-9565**,
- e-mail **foodrecycling@zerowaste.com**,
- or visit **www.metrokc.gov/soils** and click on the "*Food Recycling*" link or **www.cityoflfp.com** and click on the "*Recycling - Solid Waste*" link.

Q. ***How can I reduce odors?***

A. To reduce garbage odors:
Make sure you always tie off your garbage bags before placing them outside in your garbage can or cart.

To reduce food, soiled paper and yard waste odors:

- Collect food waste and soiled paper inside in an air-tight container. When discarding into your outside Compostainer bury the wastes under a layer of yard waste and/or bag them in a paper garbage bag.
- Consider wrapping smelly items such as crab shells in newspaper and freezing until collection.
- Rub vinegar on the bottom of your Compostainer. This helps with odor and summer fruitflies.
- Hose out your Compostainer occasionally to keep it clean and prevent those lingering odors.

Q. ***What happens to the material after it's picked up?***

A. Materials are shredded and then composted. The final product is then screened, blended and marketed for use as regular compost sold to commercial landscapers.

This information is available in alternative formats for individuals with disabilities upon request.

Mail-back Survey:

We want to hear from you! Please take a few moments to give us your feedback. After finishing the survey below, simply tear off along the perforation and drop it off in the mail. Your ideas and suggestions will help us improve food recycling to better serve your neighborhood.

No postage required!

(1) Program Information: King County and Lake Forest Park mailed two letters, held a public meeting on program design, put a notice in the Town Crier and included materials with your Compostainer: **Did you receive the appropriate information about how this pilot was going to work?** ❑ yes ❑ no

Which of the following was the most effective means of communication for you? ❑ letters ❑ public meeting ❑ notice in Town Crier

Where else have you heard of or learned about the program? _____

_____

Were the instructions clear? ❑ yes ❑ no If no, what was unclear?

_____

(2) Do you use your Compostainer? ❑ yes ❑ no

(2a) If yes: How does the cart's functionality (maneuverability, stability, ease of cleaning, apparent durability) **compare with your existing yard waste cart?**

_____

(2b) Please check the items you place in your Compostainer:
❑ yard waste ❑ food waste ❑ soiled paper ❑ Other: _____

_____

(2c) If you've been using the Compostainer for both your yard waste and kitchen waste, have you noticed any odor? ❑ yes ❑ no

(2d) What percentage of the container do you fill with food waste per pickup (estimate)?_____%

(2e) Have you noticed a reduction in your volume of garbage? ❑ yes ❑ no

(2f) If you don't use the Compostainer: Why not (check all that apply):
❑ Don't have yard waste, food waste or soiled paper
❑ Am not comfortable recycling those materials
❑ The kitchen container does not fit in my kitchen (too small? too big? wrong shape?)
❑ Don't have enough yard waste or paper waste to layer with the food waste

❑ Problems with animals (What animals?_____)

❑ Other: _____

(2g) What can we do to increase your willingness to recycle your food and soiled paper waste? _____

_____

(3) What are the biggest barriers to participating in the pilot program?
❑ Managing food wastes in the kitchen ❑ Finding a place for the Compostainer
❑ Knowing which materials can be recycled ❑ Other: _____

_____

(4) What do you like about the pilot program? _____

_____

(5) What do you dislike about the pilot program? _____

_____

(6) Please provide suggestions, comments and/or ideas to improve the pilot program. _____

_____

_____

Food Recycling Program Update

The Food Recycling pilot program is now in full swing and residents throughout selected King County neighborhoods are discovering a new way to get rid of old food scraps, pizza boxes and grass clippings with one easy step – RECYCLE THEM!

As part of its effort to promote resource conservation and recycling, King County and partner cities are testing the new recycling program. The pilot program reduces landfill waste and diverts recyclable materials to a local composting facility. Several other U.S. and Canadian cities have successfully introduced similar programs

Jerry Bartlett, General Manager of the Cedar Grove Composting Facility, points out that residents have caught on quickly due to the convenient structure of the program. "The variety of materials coming into our facility shows that people really understand what the program is about. We're seeing everything from baked potatoes to pizza boxes mixed in with the grass clippings. It's really encouraging and we're excited that people are taking advantage of this great service."

While most people consider it second nature to separate materials such as paper, glass and aluminum for recycling, residents and the media quickly took notice of the idea of recycling chicken bones and apple cores. Forty-seven news stations across the country picked up the story after CNN broadcast a feature story about the program. Food recycling is being increasingly recognized as another positive new step towards waste reduction.

We want to hear from you! Please take a few moments to fill out the survey on back, tear off and drop it in the mail. ***No postage required!***

NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES

BUSINESS REPLY MAIL
FIRST CLASS MAIL PERMIT NO. 01180 SEATTLE, WA

POSTAGE WILL BE PAID BY ADDRESSEE

King County Department Of Natural Resources
Solid Waste Division
201 South Jackson St., Suite 701
Seattle, Washington 98104-3855

Perforated or cut-out to place on fridge detailing what can and can't be recycled and maybe a few helpful hints on controlling odor.

yes

FOOD WASTE
- fruit and vegetable peelings
- egg shells, cheese and dairy scraps
- table scraps
- meat and fish scraps and bones
- coffee grounds

FOOD-SOILED PAPER
- used paper towels and napkins
- used pizza boxes & paper take-out containers
- milk and juice cartons (without plastic or aluminum coatings)
- coffee filters

YARD WASTE
- grass
- leaves
- clippings and prunings
- house and garden plant waste
- sod
- branches under 4 inches in diameter

no

Plastics • Diapers • Kitty Litter • Liquid Wastes
Ashes • Pet Wastes • Rocks, Stones

USEFUL TIPS:

- **In the kitchen:**
  - Use a paper milk carton to collect food waste. The cartons are compostable so, when full, simply throw the whole lot in your yard waste container.
- **To reduce odors:**
  - Sprinkle and intermix food wastes with yard waste
  - Wrap food waste in paper before placing in your yard waste container
  - If food is really smelly, such as crab shells or poultry, wrap in paper and freeze until collection day
- **To keep your yard waste container clean:**
  - Hose out and dump water on the lawn
  - Line your yard waste container with paper or cardboard
  - Rub vinegar on the lid to discourage fruit flies

QUESTIONS OR COMMENTS:

You can reach us at: Food Recycling Hotline: **(206) 352-9565**
Email: **foodrecycling@zerowaste.com**
Web site: **www.metrokc.gov/soils**

Food Recycling helps protect our environment!

King County
Department of
Natural Resources and Parks
Solid Waste Division
King Street Center
201 S. Jackson St.
Seattle, WA 98104-3855

PRSRT STD
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SEATTLE, WA
PERMIT #14146

Attachment C

King County
Department of Natural Resources and Parks
Solid Waste Division

Compostable Recycling

November 2002

Printed on recycled paper

Have a Compostable Thanksgiving

Don't forget to put unused scraps from Thanksgiving in your yardwaste container– paper, turkey parts and uneaten leftovers.

We want you! And your paper!

If it seems like a large portion of your household waste is soiled paper, you are right. The Compostable Recycling program allows you to recycle soiled paper products such as paper plates, napkins and cups as well as items like coffee filters, ice cream containers and pizza boxes. If you aren't already taking advantage of this opportunity, you will be surprised how much your garbage will decrease when you place these compostables in your yard debris container for composting.

A great benefit of adding food-soiled paper products is that it helps to keep your yard debris container cleaner and reduces odors by soaking up liquid. You will really notice the benefits of recycling paper during the winter months when there is relatively little yard debris in your container.

What is in a name?

You can recycle more than just food

We've changed our name to Compostable Recycling. We made the switch because food items are not the only materials accepted by the program. Incredible amounts of soiled paper can also be recycled in your yard debris container. Food, soiled paper and yard debris can all be composted and turned into landscaping products.

Our Partners:

City of Kirkland, Washington · City of Issaquah · The City of Redmond, Washington · Rabanco · WM Waste Management

Winter Collection Schedule Update

Your weekly yard debris collection will continue year-round throughout the pilot project. This is a change for some neighborhoods where their yard debris collection was scaled-back during winter months.

Want to participate, but don't have yardwaste?

Early next year, we will begin to test the recycling service for customers who do not have yardwaste service. Call the compostables hotline at **206-352-9565** to find out more.

Great news!

Compostable Recycling program extended

You and your neighbors can continue to get rid of old food scraps, pizza boxes and yard waste with one easy step while helping the environment – RECYCLE THEM! The pilot Compostable Recycling program under way in your neighborhood will be extended through 2003.

The Compostable Recycling pilot program is a part of King County's efforts to protect our environment by promoting resource conservation and recycling. Recycling your compostables, including food scraps and soiled paper, makes a difference by diverting recyclables to local composting facilities instead of a landfill.

Extending the program beyond December allows us to test how food recycling works through the winter months, gather additional data and try different styles of containers in select locations.

How am I helping the environment?

The more items we recycle the healthier our environment!

Food waste and soiled paper made up nearly 25 percent of King County household waste in 2001. Instead of sending this waste to the landfill, yours is recycled and turned into environmentally-friendly compost.

According to a recent University of Arizona study, as the recycling rates for materials such as glass, aluminum and office paper increases, much of the remaining garbage (by weight) is composed of compostable food wastes and soiled paper. Programs like this one are important because they help to further expand the items that can be recycled. As recycling options increase, fewer raw materials are consumed and less waste ends up in our landfills.

What is compost?

Compost is a natural organic material that is most commonly used to feed the soil in your garden or lawn. Creating compost is simply the natural breakdown of organic materials. The benefits of compost are numerous as it takes something that was once a waste and uses it as an environmentally beneficial product.

Compost is extremely popular with gardeners who mix it in with their soils. Mixing or amending your soil with compost helps to cut down on waste and improves soil's structure which lessens the need for summertime watering, chemical fertilizers and pesticides -- all of which help us have cleaner water and a healthier habitat for fish and wildlife.

What Neighbors Are Asking:

Here are a few of the most common questions being raised by your neighbors.

Q. *How can I participate in the Compostable Recycling pilot?*

A. It's easy! Waste such as food scraps, egg shells, used napkins, pizza boxes and wilted flowers simply go into your yard waste container with any yard waste you may or may not have. Everything is collected during your weekly waste pick-up.

Q. *Can I still set out food waste even if I do not have any yard waste to be picked up for collection?*

A. Yes! The container you use for your yard debris is the same container you will use for food and soiled paper waste – regardless of whether you have any yard debris to be collected or not.

Q. *Do you have any suggestions on ways to easily collect waste in my kitchen?*

A. Chances are, your kitchen is already stocked with containers suitable for storing your family's food waste until collection day. Here are a few suggestions:

- Old salsa and margarine containers work really well for small materials such as egg shells and orange peels. **Just remember – plastic containers cannot be recycled with your food waste!*
- Tupperware and paper milk or cream cartons can also be used. An old milk carton is convenient because once it is full it can be thrown into the yard waste bin to be composted.
- Another great idea is to buy a small garbage container and line it with newspaper or a paper grocery bag. Every other day you can dump all the contents at once into your yard waste bin!

Q. *Where can I find information on which materials are recyclable?*

A. Clip the "Yes/No" list included in this newsletter and post it on your refrigerator or kitchen message board for a quick reference. For more details, you can also call the Compostable Recycling Hotline weekdays from 9 a.m. to 5 p.m. at **206-352-9565**, e-mail **foodrecycling@ zerowaste.com** or visit **www.metrokc.gov/soils** and click on the compostable Recycling link. *Send us your food waste stories!*

Q. *Can I prevent odors caused by foods such as fish and crab?*

A. Definitely. The best way to reduce odors is to discard food waste such as shells, bones and meat scraps directly into your yard waste bin outside and bury it under the yard waste already collected. You might even consider wrapping items such as crab shells in newspaper and freezing them until collection day to eliminate stronger smells. If your kitchen food waste container has a lid, you can rub vinegar on the bottom of it to control unwanted odor. Also, if you use a small garbage can to collect the food waste in your kitchen, make sure to hose or rinse it out every week.

Q. *Why did King County start the compostable Recycling program?*

A. Foodwaste and soiled papers are a resource, not a waste! When these materials are recycled, they become a natural product that can feed plants and trees while improving soil health. Healthy soils can, in turn, help cleanse our air and water. King County Solid Waste Division estimates that organic waste alone makes up nearly one third of a single family's disposal stream resulting in 57,000 tons of food waste per year. During the eight months of this pilot program it is anticipated that more than 300 tons of organic material will be diverted from local landfills and instead go to the privately owned Cedar Grove Composting Facility.

Q. *What happens to the material after it's picked up?*

A. Materials are shredded and then composted. The final product is then screened, blended and marketed for use as regular compost sold to commercial landscapers.

This information is available in alternative formats for individuals with disabilities upon request.

Compostable Recycling Pilot Program; Acceptable and Unacceptable Materials

Cut-out and place on fridge for future reference

yes

FOOD WASTE
- fruit and vegetable peelings
- egg shells, cheese and dairy scraps
- table scraps
- meat and fish scraps and bones
- coffee grounds

FOOD-SOILED PAPER
- used paper towels and napkins
- used pizza boxes & paper take-out containers
- milk and juice cartons (without plastic or aluminum coatings)
- coffee filters

YARD WASTE
- grass
- leaves
- clippings and prunings
- house and garden plant waste
- soil and sod
- branches under 4 inches in diameter

no

Plastics • Diapers • Kitty Litter • Liquid Wastes
Ashes • Pet Wastes • Rocks, Stones

USEFUL TIPS:

- **In the kitchen:**
  - Use a paper milk carton to collect food waste. The cartons are compostable so, when full, simply throw the whole lot in your yard waste container.
- **To reduce odors:**
  - ***Sprinkle and intermix food wastes with yard waste***
  - Wrap food waste in paper before placing in your yard waste container
  - If food is really smelly, such as crab shells or poultry, wrap in paper and freeze until collection day
- **To keep your yard waste container clean:**
  - Hose out and dump water on the lawn
  - Line your yard waste container with paper or cardboard
  - Rub vinegar on the lid to discourage fruit flies

QUESTIONS OR COMMENTS:

You can reach us at:

Compostable Recycling Hotline: **(206) 352-9565**
Email: **foodrecycling@zerowaste.com**
Web site: **www.metrokc.gov/soils**

Compostable Recycling helps protect our environment!

King County
Department of
Natural Resources and Parks
Solid Waste Division
King Street Center, Suite 701
201 S. Jackson St.
Seattle, WA 98104-3855

Attachment D

Residential Food Waste Pilot Project
City of Lake Forest Park
Every Other Week (EoW)/Alternating Organics/Garbage Collection

Mid Program Resident Survey Report

September 2002

King County
Department of Natural Resources and Parks
Solid Waste Division
201 South Jackson Street, Suite 701
Seattle, WA 98104
206-296-4466 TTY Relay:711
www.metrokc.gov/soils

Alternative Formats Available

(206) 296-7380 TTY Relay:711

Table of Contents

1. INTRODUCTION

In July 2002, residents within the pilot program area of the City of Lake Forest Park were mailed a Food Recycling program newsletter containing a letter from the Mayor of Lake Forest Park, a program update, question and answer section, helpful tips, reminder of acceptable and non-acceptable items and a survey.

Goals of the survey were to evaluate the effectiveness of outreach and education methods employed prior to commencement of the pilot to inform residents of the program and to explain the importance of food recycling, goals of the program and how the program would work. The survey also sought to obtain resident feedback on the functionality of the Compostainers, participation rates, understanding of the program, observed decreases in garbage volume, and factors that reduce and increase willingness to participate. Additionally, the survey was deliberately sent during summer so as to obtain feedback during the hottest months when it was expected that some concerns would be greatest.

The City of Lake Forest Park and the King County Solid Waste Division will use results of this survey, combined with other Food Recycling Pilot Program evaluation measures and feed back to identify the best models for additional pilots and hopefully eventual full scale implementation.

2. SURVEY RESULTS

The following sections present results of the survey. See Appendix for the survey instrument with results.

- **Response Rate**

Response rate was high with 73 of the 296 households (25%) returning the survey by September 10th, 2002. No cut off date was set for return of the surveys but return rate had slowed significantly by mid August and by September 10th no surveys had been returned for a period of two weeks. Three surveys returned damaged with sections torn. Missing responses from these three surveys were recorded as "No response."

- **Outreach and Education**

The majority of residents (71%) reported that they received adequate information about how the pilot was going to work (Figure 1) and an even larger number of residents (82%) reported that

program instructions were clear (Figure 2). Of the 15 residents (21%) that gave "no response" to receiving adequate information, 11 (15%) reported that program instructions were clear. Seven respondents (10%) reported that instructions were not clear. Areas of confusion were reported as scheduling, how to manage an increased number of cans and knowing which items could be placed in the Compostainer. Only two respondents reported that the program was "confusing."

Figure 1. Received Adequate Information

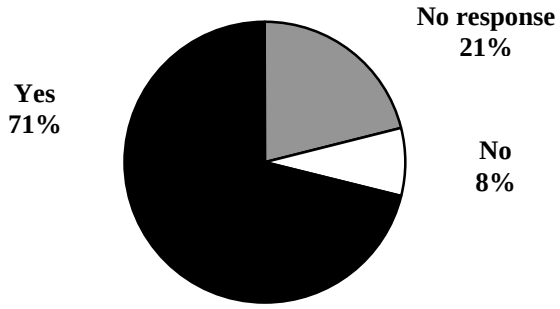
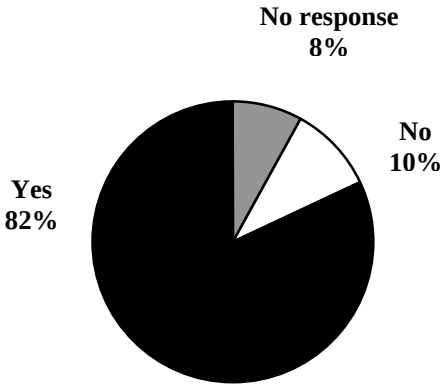


Figure 2. Instructions Were Clear



Letters were reported as the most effective means of communication by 90% of respondents (notice in Town Crier 15% and public meeting 3%). Residents also reported that they heard of the program via other methods. One respondent each reported that they heard about the program via a telephone call, through neighbors, the newspaper (Shoreline Enterprise), a council meeting and from the person who delivered the Compostainer. Only one respondent said they had to call for details.

- **Use of Compostainer**

Eighty six percent of respondents reported that they use their Compostainer (11% No, 3% No response). Materials placed in the Compostainer were reported as food waste 85%, soiled paper 79%, yard waste 68%, and 11% gave no response. Only 4% reported that they place food waste only in their Compostainer and no residents reported that they place yardwaste only or soiled paper only. One resident reported that they placed an item "other" than yardwaste, food waste or soiled paper. The item reported was "moldy paperbacks and pamphlets."

Percent of Compostainer filled with food waste per pick-up (EoW) was reported as 1 – 100%. However, reported results indicate that this question was unclear and will be discussed in section 3 of this report.

- **Compostainer Functionality**

Residents who answered "yes" to using their Compostainer were asked "How does the cart's functionality (maneuverability, stability, ease of cleaning, apparent durability) compare with your existing yard waste cart?" Responses were grouped into categories (Table 1). Twenty nine percent gave no response and 12% reported that they had no existing yard waste container meaning that 60% of respondents provided comparative feedback on the Compostainers functionality.

Table 1. Compostainer Functionality

	All respondents (n =73)	Respondents that compared yardwaste containers (n =44)
Same/OK	11%	18%
Fine/Easier/Good	25%	42%
Much better/Very good/Excellent	11%	18%
Poor	10%	17%
Other	3%	5%
No existing yardwaste container	12%	Total 100%
No response	29%	
Total	101%	

Of the 60% of respondents (44 respondents) that compared the containers, 60% reported them as being good, better or excellent compared to their existing container and 78% reported them as being the same, good, better or excellent compared to their existing container. Seventeen percent reported the Compostainer as poor and 5% provided a comment rather than a comparison. Comments from the seven respondents that reported the Compostainer as poor, regarded size (too

small), cleaning, smell, need for a dog proof top and diameter of the wheels (too small). Comments from the 34 respondents that reported the Compostainer as the same, good, better or excellent regarded maneuverability, stability and aesthetics.

Residents were asked "If you've been using the Compostainer for both your yard waste and kitchen waste, have you noticed a decrease, increase, or the same odor compared to your yardwaste cart? Three percent reported a decrease, 45% an increase, 15% the same and 37% gave no response.

- **Garbage Reduction**

When asked "Have you noticed a reduction in the volume of waste that you put in your garbage can?" 59% reported yes, 29% reported no and 12% gave no response.

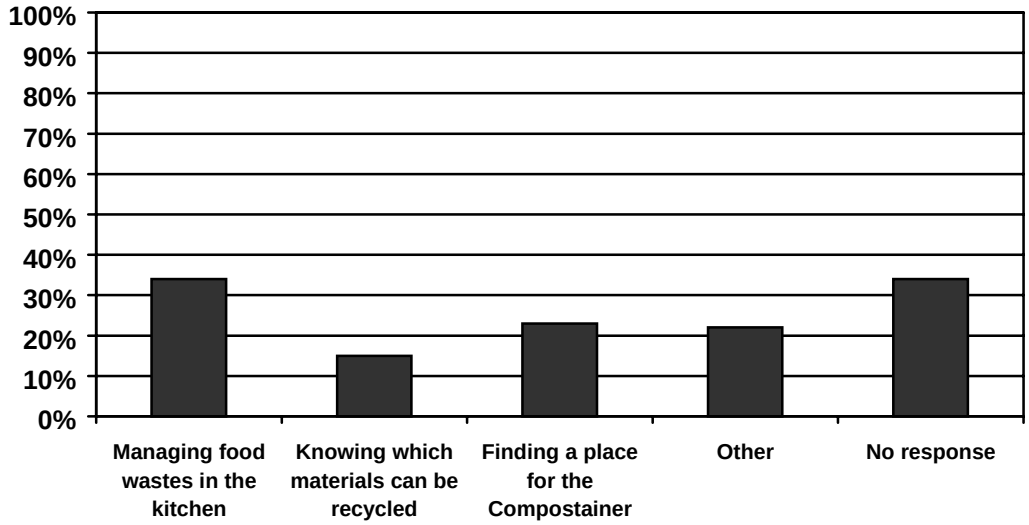
- **Why Respondents Do Not Use the Compostainer**

Eighty one percent of respondents gave no response when asked why they do not use their Compostainer. However, 86% had recorded that they do use their Compostainer meaning that some respondents who use their Compostainer also completed this question. Of the 19% of respondents who provided reasons for not using their Compostainer, the reasons most often recorded were the kitchen container not fitting their kitchen and composting the materials themselves. Reasons less often recorded were not having enough material to mix with the food waste and problems with animals. No respondents reported that they were "not comfortable recycling those materials." Of the respondents who reported using their Compostainer but who also completed this question, the reason most often reported was again that the kitchen container did not fit their kitchen.

- **Barriers to Participating in the Program**

Managing food wastes in the kitchen was reported as the biggest barrier to participating in the pilot program (34%) followed by finding a place for the compostainer (23%) and knowing which materials can be recycled (15%). Barriers reported under "other" included economic concerns, having to change habits, already composting food waste, odors and flies, and extra time/chore (Figure 3). Additional barriers reported under "other" fell into the categories of managing food wastes in the kitchen and managing extra cans outside the house.

Figure 3. Barriers to Participating in the Pilot Program

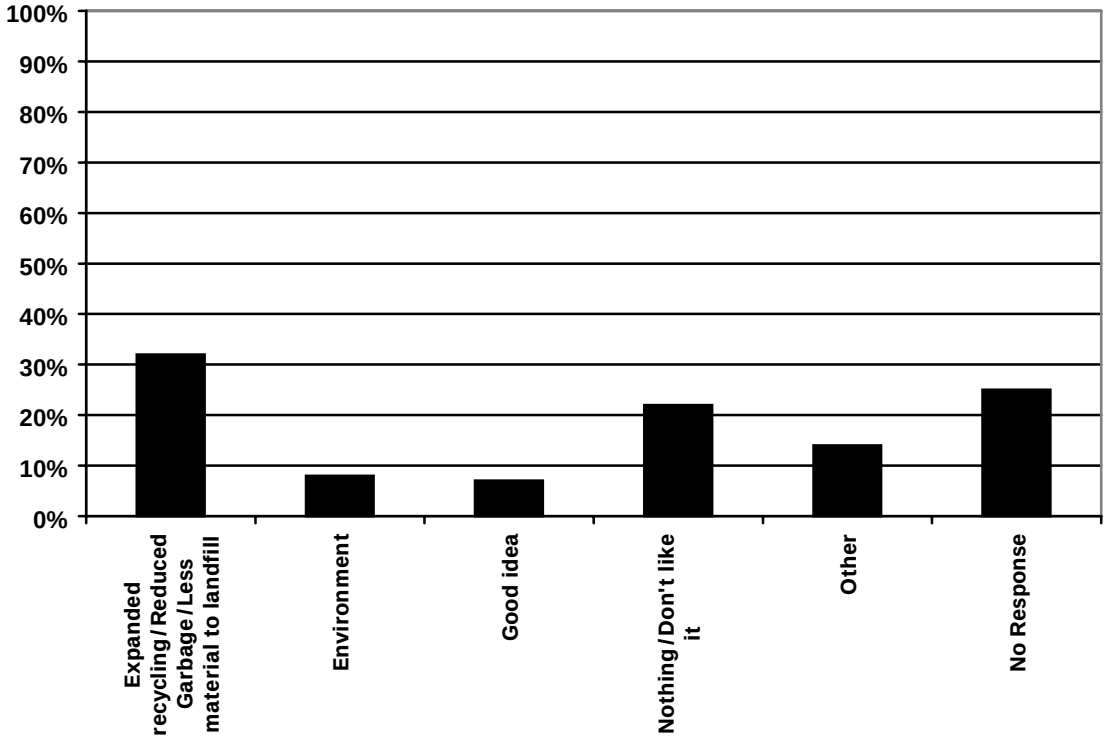


When asked "What can we do to increase your willingness to recycle your food and soiled paper waste?" 71% provided no response. Comments that were reported varied widely with most ideas being reported by one resident only. Concerns about odors was the category most often reported followed by economic concerns.

- **Program Likes and Dislikes**

When asked what they liked about the pilot program, 50% of respondents reported program factors that they liked, 22% reported that they did not like the program and 25% provided no response. Fourteen percent provided varied answers, categorized as "other," and of these 3% were categorized as negative responses. Factors were categorized as seen in Figure 4. The category of factors most often reported as a "like" was that the program expands recycling/reduces garbage/results in less material being sent to landfill. This category was followed by good for the environment and a good idea.

Figure 4. Program Likes



When asked what they disliked about the pilot program, 16% provided no response. Of those that reported a dislike, 50% also reported factors that they liked while 34% reported dislikes only. The categories of factors most often reported as dislikes were, in decreasing order, smell/mess/flies/maggots, reduced garbage pickup, extra chore/extra time/extra cleaning and too many containers inside/outside. Similarly, of the respondents who reported dislikes only, three categories were reported with equal frequency, smell/mess/flies/maggots, reduced garbage pickup, extra chore/extra time/extra cleaning, followed by the category too many containers inside/outside.

- **Respondent Suggestions, Comments and Ideas**

Respondents were asked to "provide suggestions, comments and/or ideas to improve the pilot program." Sixty three percent of respondents completed this question and responses were grouped into nine categories: very happy with the program, dissatisfied with the program, program understanding, economic concerns, pickup schedule, container size/number of containers, managing foodwastes in the kitchen, use kitchen garbage disposal, other and no response. Most comments were related to pickup schedule and economic concerns. Suggestions included EoW collection from September to May only, returning weekly garbage pickup but maintaining EoW organics collection and, in direct contrast, another suggestion was to collect organics weekly and regular trash EoW. Several comments were related to can size and number both inside and outside the house.

3. CONCLUSIONS AND RECOMMENDATIONS

According to the survey respondents, outreach and education methods successfully provided adequate information and clear instructions with letters being the most effective means of communication. However, although response rate was high (25%), the survey itself was delivered as part of a newsletter. Therefore, we cannot be certain if letters were also an effective means of communication for residents who did not return the survey.

Only six respondents (8%) reported that instructions were not clear and two of these respondents also reported that they received adequate information about how the pilot was going to work. Responses to questions about what residents are placing in their Compostainers and to questions about what they like and dislike about the program show that survey respondents have a good understanding of how the program works. For example, only 4% reported that they place food

waste only in their Compostainer indicating that residents understand the concept to mix food waste with yard waste and/or soiled paper. Although few, comments regarding scheduling and knowing which items can and cannot be placed in the Compostainer show that future programs could benefit from repeat mailings of any changes to these two elements of curbside collection.

Reported participation was high with 85% of respondents reporting that they place food waste in their Compostainer and 79% reporting that they place soiled paper in their Compostainer. However, visits to the pilot route on collection day have not supported such high participation rates. Respondents reported percent of the Compostainer filled with food waste per pick-up as 1% – 100%. However, it appears that this question was unclear because some residents reported filling their Compostainer with food waste at very high rates (50%, 80%, 90% and even 100%) while at the same time reporting that they had not noticed a reduction in the volume of waste that they put into their garbage can. Respondents conceivably missed that this question was asking about food waste only. Respondents may also have reported how full their mini kitchen container was instead of their outside Compostainer. As well, garbage collection is EoW and not weekly meaning that reduced garbage volume may be going unnoticed because residents' garbage cans are still full by collection day. In contrast, several residents that reported filling their Compostainer only 5%, 10% and 20% with food waste reported that they had noticed a reduction in the volume of waste that they put into their garbage. Although responses to percent of the Compostainer filled with food waste per pick-up do not appear accurate, a significant number of respondents (59%) reported noticing a reduction in the volume of waste that they put in their garbage cans.

Functionality of the Compostainer was reported as easier or better than that of existing yard waste containers by 60% of respondents that made the comparison indicating that residents prefer the performance of the Compostainer. Comments from the 17% of respondents that reported the Compostainer's functionality as poor compared to existing yard waste containers regarded size, ability to clean the Compostainer, odor and concerns regarding animals. Size issues can be addressed in any full scale implementation of expanded organics recycling programs by offering residents a range of container sizes. Issues concerning cleaning the containers can partly be addressed by further educating residents to wrap food wastes in paper and/or to mix with yard waste and to only place solid materials in the containers.

When comparing odors from the Compostainer when used for food waste and yard waste compared to odors from existing yard waste containers when used for yard waste only, a

significant percentage of respondents reported an increase (45%). Design of the Compostainer is meant to increase air circulation thereby reducing odors. It appears that a significant number of respondents are experiencing odors from the Compostainer when used to collect food waste, however, the survey did not ask residents to compare odors from their garbage can to that of the Compostainer. Including this comparison would provide a more complete picture of whether this model of organics and garbage collection combined with use of the Compostainer results in an overall increase, decrease or no change to odors experienced by residents compared to the existing waste collection model. Additionally, obtaining feedback from the garbage and yard waste collectors would also be useful. One resident was concerned with whether the containers are dog proof. At this mid point of the pilot we have had no reported problems of dogs or other animals accessing the contents or causing damage to the Compostainers.

Barriers to using the Compostainer and/or to participating in the program were most often reported as management of the materials in the kitchen. Issues related to kitchen management are size of the container, having an increased number of containers and odors. Similar to the outside containers, size issues can be accommodated in any full scale implementation of expanded organics recycling programs. Efforts to streamline the collection process by addressing the number of cans residents need both inside and outside the house would likely encourage participation. Although no respondents reported that they were uncomfortable recycling food wastes, it appears that some residents are uncomfortable with odors that they are experiencing or that they perceive they will experience by collecting food wastes separately from other garbage in the kitchen and by no longer collecting food wastes in plastic bags. A possible solution is to use biodegradable plastic bags but these are not currently comparable in price to regular garbage bags nor is their performance sufficiently proven. Furthermore, the Cedar Grove Compost Facility is not currently supportive of using biobags due to their extensive efforts over the years to train customers away from plastic bags. Continued outreach to educate residents to wrap food waste in paper is recommended to address this concern.

Reported program likes indicate that many residents understand and/or are concerned with the importance of reducing garbage and that recycling is one method by which garbage can be reduced. Overall, 50% of respondents reported program “likes” while 25% reported that they did not like the program. Dislikes were reported by both residents that are happy with the program and by those that are not. The major dislikes were concerns with odors, mess, flies and maggots, reduced garbage pick-up, extra work involved and too many cans inside and outside. These issues are recurring concerns and have been discussed already except for extra work. This issue

is closely tied to changing habits and habits will not be changed unless there is a perceived overall benefit to doing so. Financial savings is the benefit that will most likely encourage people to change their habits. No service fee reductions could be implemented in this nine-month pilot program, however, depending on the models adopted, full scale implementation of expanded organics recycling programs could potentially result in cost incentives to residents.

Suggestions, comments and ideas reported by residents included general comments of satisfaction and dissatisfaction with the program and similar issues to those already reported by residents answering the previous questions. A significant proportion (37%) of respondents did not answer this question but there were also a few new ideas and/or concerns. A number of respondents reported that they used their garbage disposal for food wastes and therefore did not need the program. Future outreach and education efforts could include the pros and cons of using the garbage disposal versus composting the materials. Most ideas were related to variations on the pick up schedule and pricing structures for programs. (See the Appendix for the full list of ideas.)

APPENDIX: SURVEY INSTRUMENT AND RESULTS

(1) Program information: King County and Lake Forest Park mailed two letters, held a public meeting on program design, put a notice in the Town Crier and included materials with your Compostainer: Did you receive adequate information about how this pilot was going to work?	
Yes	71%
No	8%
No response	21%
Which of the following was the most effective means of communication for you? (Multiple responses recorded)	
Letters	90%
Public meeting	3%
Notice in Town Crier	15%
Where else have you heard of or learned about the program? Eight responses (11%) Exact responses are recorded	
Had to call for details	
Telephone call	
Sent email question - got prompt response	
There was not enough notice for us to reply if we were interested in this program	
Newspaper (Shoreline Enterprise)	
Neighbors	
Talked to the man who delivered the bin	
Council meeting	
Were the instructions clear?	
Yes	82%
No	10%
No response	8%
If no, what was unclear? Seven responses (10%) Exact responses are recorded	
How to manage that many different waste disposal cans inside and out	
It was difficult to determine if it was part of or separate from the yard waste element	
Just confusing	
Schedule	
Which kinds of collection would occur when	
One paper said soil OK, other paper said no dirt	
This program is confusing to senior citizens	
(2) Do you use your Compostainer?	
Yes	86%
No	11%
No response	3%
(2a) If yes: How does the cart's functionality (maneuverability, stability, ease of cleaning, apparent durability) compare with your existing yard waste cart?	
Open question. Responses grouped according to the following categories. (Responses total 101% due to rounding.)	
Same/OK	11%
Fine/Easier/Good	25%
Much better / Very good / Excellent	11%
Poor	10%
No existing YW container	12%
Other	3%
No response	29%
(2b) Please check the items you place in your Compostainer. (Multiple responses recorded)	
Yardwaste	68%
Foodwaste	85%
Soiled paper	79%

Other	1%
No response	11%
(2c) If you've been using the Compostainer for both your yard waste and kitchen waste, have you noticed a decrease, increase, or the same odor compared to your yardwaste cart?	
Decrease	3%
Increase	45%
Same	15%
No response	37%
(2d) What percentage of the container do you fill with food waste per pickup (estimate)?	
Responses ranged from 1 - 100%.	
(2e) Have you noticed a reduction in the volume of waste that you put in your garbage can?	
Yes	59%
No	29%
No response	12%
(2f) If you don't use the Compostainer, why not. (Multiple responses recorded)	
Don't have yardwaste, foodwaste or soiled paper	4%
Am not comfortable recycling those materials	0%
Kitchen container does not fit in my kitchen (too small? too big? wrong shape?)	8%
too small	0%
too big	1%
wrong shape	1%
Don't have enough yardwaste or paper waste to layer with the food waste	5%
Problems with animals (What animals?)	4%
rats	3%
maggots	1%
Other (Eleven responses. Exact responses are recorded)	15%
Large lot, recycle everything in own yard	
The food waste I bury in my garden which has a volume of less than 1/2 cu foot	
We have a garbage disposal but mainly we recycle our own foodwaste in an appropriate mannor	
Crows	
I compost my yard waste	
Enough sorting is enough, already we have recycling, yard waste & garbage	
Yard waste, grass etc too much to put in small container	
Food waste is managed with disposal, paper waste too bulky for kitchen container	
I compost myself	
I already compost - so I only put in things I don't want in my compost - meat scraps etc	
Kitchen container could be larger	
No response	81%
(2g) What can we do to increase you willingness to recycle your food and soiled paper waste? Open question. Responses grouped according to the following categories. (Responses total 101% due to rounding.)	
Nothing (resident very happy with program)	5%
Nothing (resident unhappy with program)	5%
Economic concerns	5%
Odor/flies	8%
Extra time needed to participate	1%
Use garbage disposal	1%
Resume weekly garbage pickup	1%
Have a seasonal program. Smells worst in summer	1%
Send out schedules	1%
Bigger airtight container for food and paper waste in house	1%
Bags to put in the small container	1%
No response	71%
(3) What are the biggest barriers to participating in the pilot program? (Multiple responses recorded. Total = 128%)	
Managing food wastes in the kitchen	34
Knowing which materials can be recycled	15
Finding a place for the compostainer	23
Other	22

No response	34
(4) What do you like about the program? (Open question. Multiple responses recorded. Total = 108%) **Responses grouped according to the following categories.**	
Environment	8
Expanded recycling/Reduced garbage/less material to landfill	32
Nothing / Don't like it	22
Good idea	7
Other (1% neutral, 10% positive, 3% negative)	14
No response	25
(5) What do you dislike about the program? (Open question. Multiple responses recorded. Total = 108%) **Responses grouped according to the following categories.**	
Smell / mess / flies / maggots	27
Reduced garbage pickup	21
Extra chore/extra time/extra cleaning	16
Too many cans inside/outside	11
Remembering schedule	5
Nothing	5
Other	7
No response	16
(6) Please provide suggestions, comments and/or ideas to improve the pilot program. Responses grouped according to the following categories. Responses were split and included in multiple categories when responses contained comments about several aspects of the program. Total > 100%.	
Very happy with the program	11%
Great program and fairly easy	
I enjoyed reading the bulletin you sent. I really hope this pilot is very successful so we can continue. It is a privilege to participate.	
We were composting personally before the program - we like it.	
You have done a GREAT job!! Thanks! June Ireland. (I was planning to write)	
I love it and talk about it all the time!	
It is a great program! I'm so pleased LFP is part of this pilot. Hope it continues…Thank you!	
I would like a second kitchen container it is such a good design.	
I think it's a great program!	
Dissatisfied with the program	11%
I feel like a 2nd class taxpayer getting reduced service and increased work load and additional space required inside and out.	
End this program. We started using the Compostainer at first but couldn't find room in kitchen for all the different types of trash to sort so we gave up.	
Quit the program! We have a compost pile and use our disposal for most of the food waste. I want a weekly garbage pickup. This summer we have stinky garbage and stinky food/yard waste - it's gross.	
Terminate program	
Extra 32 gallon can you gave me does not have wheels. Long driveway.	
Extra litter that is around on pick up days due to over filled cans (caused by) every other week pick up.	
We feel that this program is neither time effective for us nor cost effective for you.	
Freezer is full - no room for smelly garbage i.e. shellfish waste	
Program understanding	3%

I was unclear how to deal with existing yard waste container	
It should be made clear that the compostainer should be filled prior to using yard waste container. (A problem our next door neighbor faced.)	
Economic concerns	10%
We are paying the same amount for garbage pickup for half the service!	
Reduce garbage pickup fees to the customer. One truck instead of two must save someone a lot of money.	
Why am I paying more for less service?	
You are selling the waste as compost. Will our rates increase if the program works 100%?	
Allow us to buy a larger garbage can that holds 2 wks of garbage or rent one of yours for a very reduced rate.	
Wave the charge for extra trash if lid won't close.	
Could the program include larger garbage cans at no additional fees?	
Pickup schedule	16%
Better schedule	
Weekly trash service	
Would like to see garbage pickup every week, stinks up garbage when every 2 weeks	
I prefer garbage pickup every week	
I want a weekly garbage pickup	
Provide every week pickup for all types of cans	
Continue the Compostainer but pick up regular garbage each week	
Smells and fruit flies seem to indicate weekly pickup better - you could still skip a week on regular trash	
This can't be healthy through the warmer months. Perhaps try Sept-May collection.	
We have made dump runs due to EoW collection & summer projects	
No problem with composting. Just too much trash for two weeks.	
Provide some place to drop off regular trash	
Container size / number of containers	5%
Allow us to buy a larger garbage can that holds 2 wks of garbage or rent one of yours for a very reduced rate.	
Smaller cans for senior citizens	
Too many cans kept around yard	
It would be easier if it were mixed with general yard waste - we have lots of waste containers outside	
Managing food wastes in the kitchen	5%
We keep bowl lined with newspaper in kitchen sink & wrap scraps in paper when bowl gets full	
We started using the Compostainer at first but couldn't find room in kitchen for all the different types of trash to sort so we gave up.	
Small kitchen container, same size as 1/2 gallon milk container with sealable lid	
It was unclear how to deal with existing YW container	
Residents using kitchen garbage disposals	7%
The bulk of our food waste is placed in the sink garbage disposal	
I have garbage disposal and mulching mower so I don't need this program	
Good idea in theory - not practical in application given use of disposal in house - manages most food waste already.	
We have a compost pile and use our disposal for most of the food waste.	
We use garbage disposal for soft food. Not enough food waste to make all this worth the effort. Becomes 2nd yard waste container	
Other	7%
Need a bigger list of things that can & can't go in compostainer	

As questions come in about what is OK for Compostainer, share the Q&A's in a quarterly newsletter	
Any more ideas to reduce odors?	
Drop for those who don't need it	
Can we purchase the compost material for our own gardens?	
No response	37%

ATTACHMENT E

LAKE FOREST PARK
FOOD WASTE COLLECTION PILOT PROJECT
COMPOSITION ANALYSIS

EXECUTIVE SUMMARY

Both garbage and organic waste were sorted as part of the Lake Forest Park Residential Food Waste Collection Pilot project to assist in determining how much food and compostable paper are being diverted from the Cedar Hills Landfill and sent to Cedar Grove Composting, Inc.

Key Findings

The following conclusions are the key findings of this analysis:

- Comparing the garbage from the pilot area to the non-pilot area, it appears that the pilot project has led to a significant reduction of food waste being disposed.
- The results of the samples taken from the organics stream from the pilot area confirms that food waste and compostable paper are being diverted from the waste stream.
- Sorting of the organics delivered to the compost facility found 86% yard waste and 13% food and soiled paper.
- Curiously, the amounts of other wastes, including kitchen garbage, recyclable containers, recyclable paper and other household garbage, were higher in the load of garbage from the pilot area.
- The amount of food waste found in both garbage samples, on a percentage basis, is significantly higher than the amount of food waste typically found in garbage according to recent waste composition data for single-family homes in King County. On a per capita basis, however, the difference is not as great, leading to the conclusion that this area is performing somewhat better than average on diverting other materials in the first place. In other words, as greater amount of recyclable materials such as cans and bottles are diverted, the greater is the apparent percentage of the remaining materials.

The results should be viewed with caution, however, since the samples were only taken at one point in time and so may not reflect the typical waste streams or long-term trends.

INTRODUCTION

King County, with assistance from Sound Resource Management Group, Rabanco and the City of Lake Forest Park, is conducting a pilot project in food waste collection. Within part of a garbage route in the City of Lake Forest Park, garbage customers have had their garbage service changed from weekly to every-other-week collections, and organics (yard debris, food waste and compostable paper) collected in the alternating weeks.

To test the amount of diversion being achieved through the pilot collection project, Green Solutions was retained to conduct two composition analyses:

1) a sample of garbage from the pilot area was sorted and compared to a sample from a nearby area that does not have the expanded organics collection service.
2) samples from a load of organics delivered to Cedar Grove Composting were also sorted to determine the percentage of food and compostable paper.

APPROACH

On October 9, 2002, Rabanco collected the waste set out by 31 households in the pilot area and delivered this load to King County's First Northeast Transfer Station. Waste was also collected from 32 households in an area near the pilot area, and this was separately delivered to the transfer station. At the transfer station, a crew supervised by Green Solutions sorted the entire loads into nine categories. Standard sorting practices were used, and once sorted into containers the various materials were weighed and then disposed or retained for pictures (see Attachment A for more details, including the sorting form and definitions).

On October 17, a Green Solutions crew sampled the pile of organics collected from the pilot area. Five samples were taken from various locations throughout the pile, and these samples were sorted into the same categories as the garbage samples sorted the previous week.

Since the sampling and analysis were only conducted for one point in time, the following data should be viewed with caution as the results may have been impacted by seasonal trends, random error, or other factors.

RESULTS, COMPOSITION OF SAMPLES

Table 1 shows the breakdown of the garbage and organics samples on the basis of percent by weight. For the garbage samples, the entire loads were sorted and so the percentages were calculated based on the total amounts of the various materials found in each load. For the organics stream, the figures shown are an average of the five samples taken from the load.

Comparing the garbage from the pilot area to the non-pilot area, it appears that the pilot project has led to a reduction of food waste being disposed. Garbage from the pilot area contained only two-thirds as much food waste (25.1% by weight) as garbage from the non-pilot area (38.7%). Compostable paper follows a similar pattern, with garbage in the pilot area containing only three-fourths as much compostable paper (5.8%) as garbage from the non-pilot area (7.9%). The results of the samples taken from the organics stream from the pilot area confirms that food waste and compostable paper are being diverted from the waste stream.

On the other hand, the amounts of other categories, including kitchen garbage, recyclable containers, recyclable paper and other household garbage, were higher in the load of garbage from the pilot area. Note that the last category shown in Table 1 ("other") is an artifact of the sorting process. The "other" category is simply the residue remaining after all sizable materials had been removed and categorized, and so no meaningful conclusions can be derived from that data.

The amount of yard debris found in the pilot area sample (2.2%) appears to be higher than the non-pilot area (0.1%), however this is the result of one bag of yard debris found in the pilot area sample. Except for that one bag, only incidental amounts of yard debris were found in either load. The presence of a single bag of yard debris is an example of random error that can occur with waste sampling studies, especially with a one-time test such as this.

It is interesting to note that the amount of food waste found in both samples is significantly higher than typically found in King County. According to a recent waste composition report prepared for King County, the amount of food waste found in the garbage from single-family homes is only 24.0% (or 22.2 to 25.8% at the 90% confidence level). The average amount of yard debris is

Table 1: Composition of Samples, Percent by Weight

Material Category	Pilot Area		Non-Pilot Area
	Organics	Garbage	
Yard Debris	85.5%	2.2%	0.1%
Food Waste	6.6	25.1	38.7
Compostable Paper	6.5	5.8	7.9
Kitchen Garbage	0.0	6.2	4.0
Recyclable Containers	0.02	7.1	4.2
Recyclable Paper	0.3	12.2	11.0
Other Household Garbage	1.1	35.5	24.6
Other	0.0	6.1	9.3
TOTAL	100.0%	100.0%	100.0%

5.1%, so both the pilot area and non-pilot areas are lower than typical but this could be primarily a function of the time of year and the dry weather pattern that has persisted over the past several months. Recyclable containers in the county-wide waste stream was measured at 6.2%, which is too close to the figures found in the pilot and non-pilot garbage samples to draw any conclusions.

The data in Table 1 is important in that it shows the composition of the waste streams and the organics fraction, however it can be misleading to draw conclusions on household generation patterns from this data. For example, as an area diverts more material through recycling programs, figures based on percentages by weight for the remaining materials will increase even if the actual weight of those materials remains the same because the overall amount of waste shrinks. Data expressed on a per-household basis can be a more accurate method for examining generation patterns.

RESULTS ON A PER CAPITA BASIS

Table 2 shows the results on a per capita basis (pounds per household per week). The last column of Table 2 shows the results of a previous county-wide waste composition study, including the range of values associated with the 90% confidence level as reported by that study.

Expressing the results on a per-capita basis shows that the amount of food waste in the pilot area is lower than typical, which could be attributed to diversion through the pilot program. The amount of food waste in the non-pilot area, however, is higher than typical. At 8.9 pounds per household per week, the amount of food waste in the non-pilot area is 27% higher than the upper end of the range (7.0) for a typical King County household. One possible explanation for this is the difference in demographics for Lake Forest Park versus the rest of King County.

Census data shows that Lake Forest Park has close to the same number of people per household (2.55) as the rest of King County (2.57, excluding Seattle), but fewer households with children under the age of 18 (31.8% in Lake Forest Park versus 34.4% in King County exclusive of

Table 2: Results, Pounds per Household per Week

Material Category	Pilot Area, Organics (1)	Waste Stream		
		Pilot Area, Garbage	Non-Pilot Area, Garbage	Average for King County (2)
Yard Debris	14.0	0.5	0.03	1.4 (0.9 - 1.9)
Food Waste	1.1	5.8	8.9	6.5 (6.0 - 7.0)
Compostable Paper	1.0	1.3	1.8	NA (3)
Kitchen Garbage	0.0	1.4	0.9	NA
Recyclable Containers	0.0	1.6	1.0	1.7 (1.4 -1.9)
Recyclable Paper	0.0	2.8	2.5	NA
Other Household Garbage	0.2	8.1	5.7	NA
Other	0.0	1.4	2.1	NA
Total	16.3	23.1	23.0	27.2

Notes:
1. Per-capita rates have been calculated based on the weight of the organics load and the total number of households in the pilot area (296 households) including non-participants.
2. Average values for King County have been derived from the final report for the Waste Monitoring Program (Cascadia 2000) with additional analysis by King County staff and Green Solutions to derive per-capita figures.
3. NA = Not Available, direct comparison of some of the categories used for this project versus categories from the Waste Monitoring Program are not possible due to differences in definitions and sorting methods.

Seattle). A larger percentage of the households in Lake Forest Park contain senior citizens (23.4%) than the rest of King County (17.5%, again exclusive of Seattle). These demographic differences may help explain the difference in the amount of disposed food waste found by this study versus the previous county-wide study, but are probably not sufficient to explain a 27% increase. It is more likely that there are a combination of factors that have contributed to this difference, including random error and seasonal variations. Based on these issues, the performance of the pilot project should be evaluated based on the results of this analysis and not through a comparison to the county-wide figures.

CONCLUSIONS

Food Waste

The sample from the pilot area contained a significantly lower amount of food waste, at 25.1% versus 38.7% in the non-pilot area. On a per capita basis, adjusting for weekly amounts, households in the pilot area are generating only 5.8 pounds per week versus 8.9 pounds per household per week in the non-pilot area. Both measures lead to the conclusion that the pilot area is disposing of only 2/3 of the "regular" amount, with approximately three pounds per household per week being composted or reduced. Results from sorting the organics stream from the pilot area did not find the "missing" three pounds per household but it is possible that part of this amount is being reduced (not being generated) due to the increased attention being paid to food waste or increased use of in-sink food disposals.

Both areas contained a significant amount of untouched food, still in the original packaging. Phone calls to the electric utility, however, found no evidence of a power outage that would have caused people to throw out more food than usual. Furthermore, the wasted food included the full range of perishable items (meat, dairy and produce), and so was not likely the result of a recall or other food safety concern (at one point, it was thought that a few recent high-profile meat recalls may have led to increased disposal of meat products). Still, it appears that some unknown factor may have contributed to a larger than normal amount of food waste being disposed, but that this affected both the pilot and non-pilot garbage samples.

In the samples pulled from the organics load, several examples were found of food waste wrapped in newspaper, as advised by the brochure for the pilot program.

Yard Debris

The results for the pilot area show a significantly higher amount of yard debris disposed with the garbage than the non-pilot area, 2.2% versus 0.1%. On a per capita basis, this is the equivalent of 0.5 pounds per household per week, versus 0.03 pounds per household per week in the non-pilot area. The higher amount found in the pilot area, however, is entirely due to just one bag of yard debris that was found in that sample. That bag contained pine needles and small amounts of dirt, and it appeared possible that the household who disposed of this may have thought it was not suitable for composting or yard waste collection.

As previously noted, the one bag of yard debris found in the pilot area sample is a good example of the random error that can occur in waste sampling and measurement studies. If sampling were conducted on several days over a longer period, it is likely that the amount of yard debris found in the pilot and non-pilot area would equalize or display another trend altogether.

Total Waste Generation

The results of this study, expressed on a per-capita basis, lead to an interesting observation that the total waste generated from both areas is virtually the same. The amount from the pilot area, 23.1 pounds per household per week, is actually 0.1 pounds higher than the non-pilot area, but this amount of difference is not statistically valid and so the most that can be concluded is that the waste disposal rates are virtually the same. This conclusion should also be conditioned on the fact that

this was a one-time measurement, and so it can only be concluded that the waste disposal rate at this point in time, and for the sampled households, is nearly identical. Examination of waste disposal records or other measurements would be necessary before any reliability could be placed on this conclusion. If this data can be taken at face value, however, it would appear that the households in the pilot area may be disposing of additional amounts of other recyclables and garbage, since their per-capita disposal rates for the other materials measured in this study are generally slightly higher. In other words, the households in the pilot area may be "trading" their efforts in diverting more compostable materials against reducing their efforts in more traditional forms of waste reduction and recycling.

A somewhat different conclusion is reached, however, when comparing the waste composition results from the pilot and non-pilot areas to King County in general. This comparison shows that both the pilot and non-pilot areas are generating less yard waste, recycling containers and overall garbage (the only three categories directly comparable) than the rest of King County. This could indicate that residents of Lake Forest Park are performing significantly better at recycling and composting programs, but this could also be a function of seasonal trends. The lower amount of yard debris, for instance, could be the result of the dry weather recently experienced in the Puget Sound area.

Additional Observations

Miscellaneous observations include:

- Garbage from pilot area didn't seem any more odorous than the non-pilot area. Only one or two of the five samples from the organics stream contained odiferous items, but only in small quantities.

- Food waste and compostable paper did not appear to be evenly distributed in the organics load. This could be the result of uneven participation throughout the pilot area, but this is impossible to say since there was also likely some separation that occurred in the truck after collection. Given the long driving distance and the fact that the collection truck was not tightly packed with the load, the heavier items likely settled to the bottom during the transportation of the load to the composting facility, at least to some degree. Note that the sampling plan took this potential stratification into account.

- The weight of the samples from the truck scale at First Northeast Transfer Station and the sum of the sorted materials compared favorably. The scale tickets for the two garbage loads shows the weight of the pilot area load as 1,440 pounds and the non-pilot area as 760 pounds. This compares fairly well to the sum of the sorted materials, at 1,432 and 736 pounds for the pilot and non-pilot areas, respectively. Since the truck scale weighs in 20-pound increments, a difference of up to 10 pounds or more between that scale and any other scale can be easily explained due to rounding off to the nearest 20 pounds. In other words, the difference of 8 pounds between the truck scale and the sum of the sorted materials for the pilot area is as good as can be expected. The 24-pound difference for the non-pilot area is large enough to lead to the question as to why, but there were some liquids that were lost from the sample. These liquids, including a quart or more of milk and some other beverages, leaked out of the sample onto the floor of the transfer station. There were also small bits of sample that missed the sorting buckets and were not recovered, and these losses plus scale errors can explain a 24-pound difference.

ATTACHMENT A
SORTING METHODOLOGY
KING COUNTY FOOD WASTE COLLECTION PILOT PROJECT

Standard waste sorting practices were used for the two loads of garbage and the samples taken from the organics load. These practices are briefly described below.

Arrangements were made by others to collect two samples of waste: one from the pilot program area and another from a nearby non-pilot area. In each area, the garbage set out by about 30 households was collected by Rabanco and brought to the transfer station. The loads were collected separately, while a different truck serviced the remaining stops on that route. Each load was dumped onto a tarp and stored in a secure manner until sorted. The load from the non-pilot area arrived first and so was sorted first. Once that entire load from the non-pilot area had been sorted and weighed, work began on the pilot area sample.

To sort each load, the waste was taken a few bags at a time from the storage area and placed on a sorting table. Rick Hlavka (Green Solutions) and 3 temporary laborers opened bags and sorted the contents into nine categories (see attached form and definitions). The temporary laborers were provided with a brief health and safety training before work began. Once the load was sorted, the segregated materials were weighed and set aside for photographs. King County, with some assistance from Green Solutions, took pictures of most of the components of each load. The materials were then dumped into the transfer station pit for disposal.

One question that was considered beforehand was the handling of mixed materials such as contaminated papers and containers that contain food waste. In studies addressing source separation programs, the typical approach on contaminated papers and other materials is to use the crew's best judgement on when a material was contaminated. In the case of a grease-stained pizza box, for instance, it's easy to assume that the material was generated in a contaminated state (and so the pizza box was categorized as compostable paper for this project). In the case of a newspaper smeared with some type of food waste, however, often it can seen that if the newspaper had been handled properly in the first place (i.e., placed in a recycling bin instead of the garbage can), then it would have stayed clean. In that case, the newspaper was categorized as recyclable paper (even though the recyclers would not want it at that point).

For containers with food waste, the entire package was counted as food waste when the weight of the container was negligible, such as bread in a plastic bag. This was done for productivity purposes and to avoid unnecessary exposure of the crew to mold or other problems.

For the analysis of the organics load, five samples were taken from the load rather than attempt to sort the entire load (9,640 pounds). The five samples were taken from all four sides and from different depths within the pile. The target size for each sample was between 100 and 200 pounds (average size was 115 pounds). Again, the samples were sorted and weighed separately, and pictures were taken of the samples and of each sorted category.

Results were compiled and analyzed using an Excel spreadsheet.

SAMPLE DATA FORM
FOOD WASTE COLLECTION PILOT PROJECT

Source: Pilot Area (circle one) Non-Pilot Area	Date: _____ Time: _____
Number of HH: _____ Set-outs: _____ Any bulky wastes set out: _____ _____	Sample Weight: _____ (from facility records, **get scalehouse ticket**) Truck Type and License #: _____ _____

MATERIAL	WEIGHT	NOTES
Yard Debris		
Food Waste		**Take pictures**
Compostable Paper		**Take pictures**
Kitchen Garbage		**Take pictures**
Recyclable Containers		
Recyclable Paper		
Other Household Garbage		**Take pictures**
Other, Identify:		
Large/Bulky Items, identify:		

DEFINITIONS
FOOD WASTE COLLECTION PILOT PROJECT

Yard Debris: grass clippings, leaves, branches and other vegetative wastes. For the samples of the organics stream, heavy paper bags sold specifically for yard waste collections were also counted as yard debris, primarily to avoid crediting the pilot program with diversion of compostable paper that would have occurred regardless.

Food Waste: includes all types of non-liquid food ranging from fruit and vegetable scraps to meat and by-products (meat, poultry, seafood, bones and trimmings), and also including dairy products (cheese and semi-solid products such as cottage cheese and sour cream), bread and coffee grounds. For the purposes of this test, the food waste was left in bags or other containers where the weight of the container was minor compared to the weight of the food. A similar approach was used for food-smeared paper and other materials, where the material was counted as food waste if there was a significant amount of food waste adhering to the paper that couldn't be easily removed.

Compostable Paper: non-recyclable paper, including coffee filters, napkins, plates, tissues, pizza boxes, ice cream/frozen food containers, and coffee cups. Milk cartons and other paper-based food packaging were included in this category as well.

Kitchen Garbage: non-recyclable and non-compostable food packaging (styrofoam, plastic and aluminum trays, plastic tubs, take-out containers with wire handles, and aluminum foil) and other materials commonly found in kitchens such as sponges and dish soap containers (unless the container was recyclable). This category included beverages such as bottled water, juices, and milk, since these were not defined as acceptable organics by the pilot project.

Recyclable Containers: recyclable plastic bottles (PET and HDPE bottles, including colored HDPE), glass bottles, tin cans and aluminum cans. The recycling guidelines for Lake Forest Park were used as the criteria for the materials included in this category.

Recyclable Paper: all types of recyclable papers, including cardboard, newspaper, magazines, high-grade papers (office and computer papers), and low-grade papers (i.e., mixed waste paper).

Other Household Garbage: other garbage not related to kitchen wastes, such as non-recyclable and non-compostable paper (primarily paper mixed with other materials); non-container plastics (products and film) and non-food styrofoam; non-container glass (windows, light bulbs, etc.); diapers; kitty litter; clothing and shoes; C&D wastes; consumer products; soil and rocks; non-container metals; and other wastes.

Other: any unusual items were noted here, generally only on a temporary basis for materials that were then re-categorized later. For the garbage samples, this category also included the non-sortable residue remaining after all the materials that could practicably be removed were removed and categorized.

Large/Bulky Items: large and bulky items were to be measured separately, if any were found, to test for people taking advantage of the unlimited disposal option in the pilot area, but nothing was found that fell into this category.

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ATTACHMENT F

FOCUS GROUP DISCUSSION WITH RESIDENTS OF KIRKLAND, REDMOND, AND ISSAQUAH: KING COUNTY FOOD WASTE RECYCLING PROGRAM

Conducted December 3, 2002

Summary Report

Prepared for

King County Solid Waste Division

Prepared by

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FOCUS GROUP DISCUSSION CONCERNING
KING COUNTY FOOD WASTE RECYCLING PROGRAM
DECEMBER 3, 2002

SUMMARY REPORT

BACKGROUND AND METHODOLOGY

King County is working with the cities of Kirkland, Redmond, and Issaquah on a pilot program of residential food waste collection. King County contracted with Carolyn Browne Associates to conduct a focus group discussion with a representative group of participants in this King County pilot program to learn more about the habits and attitudes of those who have been doing food waste recycling for the last several months.

Discussion participants were randomly selected from King County residents who are doing the pilot food recycling program. Some 47 households were contacted to obtain the 12 people who agreed to participate in the discussion. Consumer Opinion Services, a data collection firm in Burien, was responsible for recruiting the participants. Recruiters were instructed to seek a person responsible for "the food waste recycling or food waste composting" in the household. The recruiters were asked to select four people from each of the three cities of Kirkland, Redmond and Issaquah, and to obtain at least three or four people having households with children under 18 years of age. The discussion was held in the evening on December 3, 2002, in the Kirkland Focus Group Facility of Consumer Opinion Services, at 10829 NE 68th Street. Carolyn Browne Tamler, principal of Carolyn Browne Associates, a Bellevue marketing research and community involvement consulting firm, facilitated the focus group.

This report includes summaries of the major themes from the discussion and the participants' comments. The participants in the discussion are referred to as "participants," or "program participants."

The opinions expressed throughout this report are those of the discussion participants. It should also be noted that the comments reflect individuals' perceptions of facts.

Although information obtained from focus group discussions is not statistically significant, the responses and ideas from the participants do provide a representative portrait of the opinions of the population from which they were drawn – in this case, Kirkland, Redmond, and Issaquah adults who have been participating in the pilot food recycling program.

SIGNIFICANT THEMES

There was strong agreement that the concept of food waste recycling was good, and that it fit with the recycling ethic to which many in the Northwest are committed. Most of the discussion participants believe in the program; and there was consensus that more people will participate as the program is made more convenient and more flexible. Having a variety of options will make the program more effective and increase participation.

The group participants believe that the materials provided to explain and promote the program are well written.

Major problems cited by the participants of the program included:

- Learning how to properly sort the food waste and knowing which paper products belong with the food recyclables.
- Minimizing odors and mess;
- Having an appropriate size container for use in the kitchen;
- Creating a system that will work for each family with the understanding that each family is unique.
- Understanding of how the food waste is recycled and how the resulting compost is used.

Improvements suggested by participants included:

- Educate people about the program's benefits. People need to know how the recycled materials will be used and how this is part of the larger recycling ethic. Many can understand paper, bottle and can recycling, but the benefits of food recycling may not be known;
- Have some incentive or reward for those who participate, such as garbage credits that lower pickup fees (based on pounds per week/month); restructure fees to benefit those who recycle more;
- Provide more container options to fit the needs of different households;
- Provide weekly pickup all year round for those who participate in the program;
- Provide more promotion and marketing of the program and its benefits.

An appropriate name for the program

Regarding the current name of the program, "Compostable Recycling," there was consensus that the title was misleading or confusing. When the name "Kitchen Waste Recycling" was suggested, nearly all of the members of the group agreed that this was an effective name. "Food Recyclables" was another name that many thought would be more appropriate for the program.

Response Summaries from Focus Group Participants

PARTICIPANTS

The discussion participants were chosen, at random, from the list of 1,400 households that are part of the pilot food recycling program. Eleven of the 12 people recruited came to the discussion. The participants included five women and six men; most were in the 35 to 54 age range; and all but three have children under 18 living at home. Four each of the participants reside in Redmond and Kirkland, and three live in Issaquah.

Name	Years of Residence	City of Residence	Age Range	Children
Teresa	22	Kirkland	35 – 44	Yes
Glen	8	Kirkland	35 – 44	Yes
Cathy	7	Issaquah	35 – 44	Yes
Diane	21	Redmond	45 - 54	Yes
Susan	18	Redmond	45 - 54	Yes
Dean	7	Issaquah	35 –44	Yes
Janine	15	Issaquah	35 – 44	Yes
Fred	6	Redmond	45 - 54	No
Walt	25	Kirkland	65+	No
Craig	35	Kirkland	45 - 54	No
Steve	17	Redmond	45 - 54	Yes

INITIAL RESPONSE TO PARTICIPATING IN THE FOOD WASTE RECYCLING PROGRAM

First impressions

While most of the people in the group are familiar with, and supportive of, recycling and composting, most said the concept of food waste recycling prior to participating in this program was new to them. Many were excited by the concept of the program.

Asked for their initial response to being in this pilot program, most of the participants were pleased with the idea and excited about trying it. One of the female participants mentioned that discovering she "could combine bones and other meat by-products into the yard waste system was surprising and a bit hard to comprehend" at first, but when she understood the system, she was very glad to be able to participate. Another man said he loved having the ability to recycle kitchen paper and pizza boxes.

Was it easy to understand what you were expected to do?

People agreed that they had no problems with the new terms or understanding what they were expected to do in the program. Participants concurred that the information sent out was well written and explained everything clearly. However, as they began using the program, several questions arose about what they could and could not recycle. The greatest level of confusion concerned soiled paper products.

COMPLYING WITH THE PROGRAM

Several of the participants said they were concerned with animals (such as bears, raccoons, opossum, and neighborhood dogs) getting into the recycling container. One participant said he freezes his kitchen waste, then tries to remember to take it out to the container. A woman in the group found storage of the food waste a challenge in the beginning, especially in the summer when odors are more of a problem.

For others, keeping the container clean was an issue. Five of the 11 participants claimed they were not using the mini food waste container at all. Some are using paper milk cartons, one person didn't receive hers, another is using a container under her sink.

There was some confusion about the frequency of waste pickup in each of the three cities participating in the program. It was later clarified that during the pilot program, all areas were supposed to have weekly pickup, but surprisingly, several of the participants did not know this.

All of the participants except one were recycling regularly before the initiation of the pilot program. Nine of the 11 individuals attending the focus group discussion are currently participating in the food recycling program.

AWARENESS OF WHAT IS DONE WITH WASTE

Most of the participants had an opinion about what is done with the food waste after it is picked up; however, no one knew for certain. One person said he thought it was all dumped into a big trench and then converted to compost. The rest of the group concurred it would be good to know the volume of recycled materials resulting from the program and how the end product was being used.

THE CURRENT ROUTINE FOR DISPOSING OF FOOD WASTE / PROBLEMS WITH THE PROGRAM

The participants were asked to complete a brief questionnaire where they could describe their current patterns for disposing of food waste. The discussion continued after each person had completed the questionnaire.

All but two are currently disposing of at least some of their food waste in their yard waste container. Some of the food waste, is being tossed down a garbage disposal (especially dairy products and fruit) and/or a garbage can (especially bread and cereal products and meat and bones).

The major problems cited with the program include:

- Establishing a system to properly sort the kitchen waste;
- Dealing with odors and mess;
- Challenges with finding the appropriate container to have in the kitchen.

One participant commented that she was excited about, and fully committed to, the program in the beginning. She was surprised at how much waste her household produced that was recyclable. However, she soon had difficulty finding a convenient

way to split the waste between the garbage can and the recyclable food container. In the summer, the odors and the mess became overwhelming and her family had to severely limit what was recycled.

Another participant agreed that the process can get messy. However, she says she wraps meat containers with paper and that seems to keep the odor levels manageable.

Another problem encountered by members involves the size of the container. One participant said his container "barely fit" under his sink because he already had a regular garbage can and other non-food-related recyclable containers stored there.

One participant claimed that she never found a system that worked well with the constraints of her sink.

WHAT WORKS WELL IN THE FOOD WASTE RECYCLING PROGRAM?

Most of the participants liked the idea of the program and were committed to making it work. There was no single pattern that applied to all of the participating households. Instead, each person described a system that seemed to work uniquely for his or her household.

However, participants seemed to agree that the more options offered to residents, the better. Options create a greater likelihood that more peoples' lifestyles can be accommodated and, therefore, the program will gain greater participation.

HOW IS THIS A GOOD PROGRAM / WHAT CAN MAKE IT BETTER?

What improvements could make the program better?

Most of the discussion participants want to see the program work. They had several suggestions for ways in which the cities and King County can encourage greater participation. Several in the group agreed that these were major steps toward increasing the numbers in the food recycling program:

- Provide weekly pickup all year round (thus reducing concerns about food waste left in a container for two weeks).
- Have incentives or rewards for those who participate, such as garbage credits for lower collection fees (based on pounds per week/month), using smaller containers, or paying only when you put garbage out.
- Educate people about the program's benefits. People need to know how the recycled materials will be used. Many can understand bottle and can recycling, but the benefits of food recycling may not be known. Publish participants' suggestions in the quarterly newsletter. Get children involved through education programs in the schools.

There were several additional suggestions for improving the program:

One participant suggested that more options and suggestions on how to package waste be provided. For instance, she questioned whether waxed paper can be thrown out with the food waste. Someone remembered reading in the promotional flyer that "Kleenex"

was definitely not to be included in the food waste recycling, but most of the participants were unclear on what exactly can and cannot go into the waste stream. One participant stated that she didn't like the idea of having large segments of the compost potentially contaminated by things that should not be placed in the food waste recycling system.

Another person said that he hoped the materials that went into the food waste recycling program were put to productive use. He made the point that if a household is just dumping a small amount of "runny, wet stuff" into a container, it wasn't going to amount to much.

Another participant said she would have a hard time dumping yogurt or other soft dairy products into the container because of odors and mess. "People want to do it, but they don't want it to be inconvenient," was the consensus. Even if people "perceive" a problem, they aren't going to participate fully. A suggestion was made that continued reinforcement of the benefits was important.

What marketing themes can you think of that would encourage others to use the program?

There was consensus that the program required on-going education and consistent marketing. Some of the ideas suggested included:

- Reduce garbage fees (this would particularly attract seniors).
- Show photographs of landfills vis-à-vis compost (show by truck volume how recycling reduces landfill garbage).
- Penalize people who throw more garbage away on average.
- Promote education. Many people don't understand intellectually what recycling means.

CONCLUSION: WHAT ARE THE THREE MOST IMPORTANT CHANGES, IMPROVEMENTS OR MARKETING IDEAS YOU WOULD IMPLEMENT TO MAKE THIS PROGRAM A SUCCESS?

The most frequently mentioned ideas for improving and/or marketing the food recycling program included:

- Provide more information/education about the benefits of the program and how the recycled food waste is composted and used;
- Develop incentives for those who participate;
- Have a greater variety of containers to conform to the needs of different households;
- Do more marketing and promotion of the program;
- Provide paper liners for the mini-containers;
- Provide secure, locking containers so that animals cannot have access.

Closing remarks from participants:

Steve

- Get the facts out (e.g. volumes being recycled)
- Distribute more containers to residents
- Restructure fees

Craig
- Increment garbage rates by how much a household throws away (like water usage)
- Provide recyclable paper liners for the containers
- Create a spout in the lid so user can add baking soda (to reduce odors)

Walt
- Pick up waste weekly
- Send the message out to people about the benefits of the program
- Offer a smaller-sized container and make containers more attractive

Fred
- Add more secure locking devices to the containers
- Promote a flashy inauguration with media coverage
- Let people know the containers are coming – offer them a choice: Mariners, Seahawks, or Supersonics – and then get the teams in on the action (advertising campaign) to promote the program

Janine
- Create incentive – participants should receive value (in dollars) for their efforts
- Develop more secure locking devices for containers

Dean
- Create financial incentives
- Distribute colorful flyers to educate the public; advertise the benefits of using the program – where are the materials going?
- Find out who is not participating and ask why.

Susan
- Educate the public on where the waste is going and explain how it is used
- Conduct studies on the size of the container – maybe there's a better size
- Give participants free compost for their efforts

Diane
- Provide more options on how to package the waste
- Provide more education on the program more frequently
- Design a liner for the container

Cathy
- Distribute more information
- Create advertising that shows the program's process, beginning to end; where does the waste go and does the County make money from it?

Glenn
- Show how the program can be more convenient
- Educate the public about the program's benefits
- Explain how people who don't have yards (multi-family housing) can make the program work for them

Teresa

- Advertise the goals of the program (e.g. expected volumes) and post it in the newsletter
- Offer a variety of container sizes
- Provide all containers with rollers for easy transport

What is your opinion of the program's name?

When asked what the participants thought about the current name of the program, "Compostable Recycling," most felt the title was misleading or confusing. One participant suggested the name "Kitchen Waste Recycling," and the group concurred that this title was more precise. Another participant suggested "Food Recyclables," which was also widely accepted among the group.

Appendix

Tabulations from Questionnaires
Discussion Guide

King County Food Waste Recycling Program
Focus Group Discussion with Residents
Of Kirkland, Redmond, and Issaquah
December 3, 2002

1. In the last week, how did you dispose of the following foods wastes? (Please put an "X" in all appropriate answers:

Food Waste	Yard/Food Waste Container	Garbage Disposal	Garbage Can	Worm/ Compost Bin	Other
Fruit	8	4		1	
Vegetables	9	3		1	
Meat & bones	8		4		
Dairy products	5	5	3	1	
Bread & Cereal	8	1	5	1	
Soiled paper/cardboard	11		3		

2. What has been the greatest difficulty in fully participating in the food recycling program?

3 Properly sorting kitchen waste/setting up a system
2 Storing the waste before it is picked up
2 Odors
1 Keeping the container clean
1 Getting guests/kids not to throw kitchen waste in the garbage
1 Unable to use the provided container
1 Lack of protection from animals
2 No difficulties

3. How many people are in your household?

1 person - 0
2 people - 2
3 people - 2
4 people - 5
5 people - 2

4. How many children under 18 are in your household?

   8 of the 11 participants have at least one child in the household.

   3 children - 2
   2 children - 4
   1 child - 2

5. Do you live in a single-family home, condominium, or apartment?

   All live in a single-family home.

Food Waste Recycling Program
Focus Group Discussion with Residents
Of Redmond, Kirkland and Issaquah
December 3, 2002
Discussion Guide

I. Introduction

A. Opening remarks - CB

B. Name, city, years living in the city

II. King County did several things to let people know about the food waste recycling program that is now available where you live. How many recall seeing any articles about the program? How about these newsletters? How about this door hanger? (ASK FOR SHOW OF HANDS AS EACH ITEM IS SHOWN BY FACILITATOR)

C. What was your impression of these information pieces? Were they easy to understand? Did they encourage you to participate in food waste recycling?

D. So, how many of you decided to do something different when you received this information? (ASK PEOPLE TO DISCUSS THEIR RESPONSES)

E. Did you know anything about food waste recycling before you saw this information?

F. Was it easy to understand what you were expected to do?

G. Did you have any difficulties getting used to the new procedures?

H. Do you use the mini container you were provided?

I. Do you understand what happens to the material in the yard waste bin after it is picked up?

III. Before we continue, will you please take a couple of minutes to complete this brief questionnaire.

J. How many in this group are doing any food waste recycling or food waste composting; i.e. you are putting some food waste or food soiled papers into your yard waste container?

K. Can someone give me an example of your routine now disposing of kitchen waste? Does anyone else have a different experience? (PROBE MEMBERS OF THE GROUP FOR THEIR INDIVIDUAL EXPERIENCES)

IV. Now that you have several months' experience with this pilot program….

L. What do you believe works well with this program?

M. What do you see as problems with the way the program currently operates?

V. What could be done to make this program better and make people want to participate in it?

A. What would encourage you to participate, or to participate more fully?

B. What are the best ways to market this program to others? (LOOK FOR THEMES AND MEDIA)

C. What kind of incentives will encourage more participation in the program?

VI. (Summary): I would like to summarize by letting each of you imagine that you are in charge of the food waste recycling program for King County, and you have been given the responsibility, money and authority to make this program a success. I am going to go around the table and ask each of you to tell me the three most important changes, improvements or marketing ideas you would implement to make this program a success.

VII. Explanation of take-home Food Waste Record.

Thank you very much for sharing you ideas and opinions tonight.

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ATTACHMENT G

FOCUS GROUP DISCUSSION WITH LAKE FOREST PARK PARTICIPANTS: KING COUNTY FOOD WASTE RECYCLING PROGRAM

Conducted October 29, 2002

Summary Report

Prepared for

King County Solid Waste Division
and
City of Lake Forest Park

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CITY OF LAKE FOREST PARK
FOCUS GROUP DISCUSSION CONCERNING
THE PILOT FOOD WASTE RECYCLING PROGRAM
OCTOBER 29, 2002

SUMMARY REPORT

BACKGROUND AND METHODOLOGY

Sound Resources Management Group (SRMG) is working with King County and the City of Lake Forest Park on a pilot program of Food Waste Collection. SRMG contracted with Carolyn Browne Associates to conduct a focus group discussion with a representative group of participants in this Lake Forest Park pilot program to learn more about the habits and attitudes of those who have been doing food waste recycling for the last several months.

Discussion participants were recruited, at random, from the list of those who are part of the Lake Forest Park program. Consumer Opinion Services, a data collection firm in Burien, was responsible for recruiting the participants. Recruiters were instructed to seek a male or female head of household responsible for the food waste recycling. The recruiters were also asked to obtain at least three or four people having households with children under 18 years of age.

The discussion was held in a Conference Room of the Lake Forest Park City Hall, from 7:30 to 9:00 PM, on October 29, 2002. Carolyn Browne Tamler, principal of Carolyn Browne Associates, a Bellevue marketing research and community involvement consulting firm, facilitated the focus group.

This report includes summaries of the major themes from the discussion and the participants' comments. The participants in the discussion are referred to as "participants," or "program participants."

The opinions expressed throughout this report are those of the discussion participants. It should also be noted that the comments reflect individuals' perceptions of facts.

Although information obtained from focus group discussions is not statistically projectable, the responses and ideas from the participants do provide a representative portrait of the opinions of the population from which they were drawn – in this case, Lake Forest Park heads of households who have been participating in the pilot food recycling program.

SIGNIFICANT THEMES

The greatest deterrents to fully participating in the food waste recycling program are lack of information about why the program is important and knowing how the recycled food waste is used. Only one person in the group had any idea of the way that the food waste is composted and used for other purposes. All agreed that providing education about the purpose of the program and how the food waste is recycled would encourage greater participation and support.

Based upon the responses and comments from the group, many of those in the pilot area have chosen to participate in a limited way, and some have decided to not participate at all.

Within the representative group of 11, four said they were totally satisfied with the program and are doing everything they can to fully participate. Their satisfaction is based, to a great extent, on having a recycling ethic. This program is seen as an important way of adding to the recycling they have been doing. Those who are satisfied with the program say they "love it" and are pleased to be able to have a place to recycle paper plates, napkins, pizza boxes, and other paper food wrappings.

Four members of the group are using the Compostainer for many of their food wastes, but have reservations and concerns about using the smaller kitchen container, knowing what waste should go into the Compostainer, or having to do what is required to fully participate in the program.

Three of the participants said they are not participating in the program in any way. They are adamant about the fact that they do not want to deal with food waste other than putting it down a garbage disposal or tossing it out with the rest of the trash. One person feels he already composts everything, so there is no food waste to be taken away.

In addition to the lack of information about the program's purpose, there are other challenges with the program as it exists now:

- Odor and insect problems associated with the small kitchen container and with the Compostainer;
- Dissatisfaction with every-other-week pickup of trash;
- Confusion about whether two cans or a larger can may be used for trash pickup;
- A feeling that filling up a small kitchen container with food waste and transferring it to the larger Compostainer is a hassle and not convenient.

The most important ways to encourage greater participation in the food waste recycling program include:

- Educate the public about the program and what is done with the food waste;
- Resolve the problems of odors and insects;
- Have an incentive program or compensation for those who participate;
- Provide larger trash cans or two trash cans for those who need them.

Response Summaries from Focus Group Participants

PARTICIPANTS

The discussion participants were chosen, at random, from the list of 300 households participating in the pilot food recycling program. The 11 people who came to the discussion included four women and seven men ranging in age from late 30s to over 65. Five of the discussion participants have children under 18 years of age living at home.

Name	Years in Lake Forest Park	Occupation	Age Range	Children
John	20	Human Resources Manager	45 - 54	Yes
Kim	13	Home Maker	35 - 44	Yes
Kolden	22	Retired	65+	No
Mel	28	Semi-Retired/work at Albertson's	65+	No
June	25	Instructional designer	55 - 64	No
Jerry	11	Retired	65+	No
Dave	13	Real estate broker	45 - 54	Yes
Jeff	6	Aerospace engineer	35 - 44	Yes
Carol	36	Works for Unesco	55 - 64	No
Jeff	5	Owns stump grinding company	35 - 44	Yes
Ruth Anne	12	Retired	45 - 54	No

INITIAL RESPONSE TO PARTICIPATING IN THE FOOD WASTE RECYCLING PROGRAM

First impressions

While most of the people in the group are familiar with and supportive of recycling and composting, most said they were unfamiliar with food waste recycling prior to participating in this program.

Asked for their initial response to being in this pilot program, there were strongly divergent views. One man immediately responded, "I hated it. I don't do it; I don't use the container. There are only two in the house, so we don't need it." Another person quickly added, "It's the same for me." Others in the group said they love the program because it allows them to recycle more of their waste.

Some felt they were short-changed by having their weekly garbage pickup taken away. Another participant felt that since they already were putting everything in their own composter, this program did not provide any additional incentive.

Several (six in the group) started out using the small kitchen container, but quickly stopped because of problems with odor and inconvenience.

One person said they tried using the small kitchen container at first, but because of the odor and fruit flies, soon switched to using milk cartons that could be tossed in the Compostainer.

Was it easy to understand what you were expected to do?

People agreed that they had no problems with the new terms or understanding what they were expected to do in the program. Participants concurred that the information sent out was well written and explained everything clearly.

COMPLYING WITH THE PROGRAM

The participants were sharply divided between those who love the program and appreciate having a recycling method for disposing of food wastes, and those who are upset with what they see as more hassles and problems dealing with a new system of handling waste.

Those who appreciate the program say they use it a lot. For a minority of people in the group (about four of the 11) the program works very well. Some have stopped using their garbage disposals. One person said she no longer has to use her "slimy" worm bin. A mom of teenagers likes being able to toss pizza boxes into the Compostainer.

Those who do not like the program say that dealing with one more type of can takes too much time and trouble.

There was some confusion about whether an extra garbage can or a larger garbage can may be used for the every-other-week pickup. Several say they have too much trash for the single can. One person said he bought a second container the same size as his original garbage container because he believes using the two cans fits the rules of the program.

Six of the 11 in the group are not using the small kitchen container. For most, this extra container is not necessary and attracts fruit flies and leaves odors in the kitchen. One person said, "It's one extra step that is not needed." Another noted that the small container is "too small to handle a pizza box." Some said they tried using the small container, but the smells were terrible (especially from chicken bones). Some noted that milk cartons can be used, or people can just wrap the food wastes in paper and dump them directly into the Compostainer.

AWARENESS OF WHAT IS DONE WITH WASTE IN THE COMPOSTAINER

Most of the participants had no idea what is done with the food waste after it is picked up. One person said, "I understood you made compost to sell commercially and use in the parks." Another thought it was going in with the yard waste, but wasn't quite sure what was done with the yard waste.

THE CURRENT ROUTINE FOR DISPOSING OF FOOD WASTE

The participants were asked to complete a brief questionnaire where they could describe their current patterns for disposing of food waste.

What goes in the Compostainer

Most of the participants are using their Compostainer for most of their food waste.

Participants were asked to record how they disposed of their food wastes for the previous two days. Most (eight) indicated they used the Compostainer for fruit,

vegetables, meat and bones, and soiled paper and cardboard; seven put dairy products and bread and cereal in the special container. Most of those who did not use the Compostainer, placed the food waste in the garbage disposal or their garbage can; a couple of the participants also used a worm bin, or gave leftover meat and bones to a dog and leftover bread and cereal to chickens.

What is your routine?

Those who are fully participating in the program appear to have created simple patterns for disposing of the food waste. One woman says she takes out whatever is in the little container to the Compostainer when she gets the mail at night; on weekends, she adds the yard waste. A mother of teenagers noted that instead of having her children scrape their plates into the waste basket, they scrape them into the small container; after she is done with the dishes, she empties the small container into the Compostainer and then washes it. Others have developed a system for sorting their garbage.

Six of the 11 people do not use the small container, but some have come up with other systems that make use of the Compostainer. Some of those who do not like, or refuse to participate in the food waste recycling program, seem to have chosen not to participate because they feel that placing items in the small container is unacceptable to them.

How did you know what was supposed to go in the Compostainer when you started the program?

Participants agreed there was "no problem" understanding what was supposed to go into the Compostainer. All were very satisfied with the educational materials provided with the program. One person, an industrial designer, said, as a professional, she thought the materials very good.

One person was confused by the meaning of "soiled napkins." He asked if that term included used Kleenex. Another person responded by saying that you're not supposed to put anything like that in the container.

WHAT WORKS WELL IN THE FOOD WASTE RECYCLING PROGRAM?

Those who are fully participating in the program are very enthusiastic about its many benefits: "It has cut down on my garbage tremendously;" "It's a great way to dispose of paper plates and pizza containers;" "I live in a small household and my wife and I had it down so that we only had our garbage picked up once a month, so now we get it picked up twice a month." An older man, who did not have a garbage disposal when he was young, said that he got used to using paper bags and newspapers to wrap food waste; now, he finds he is doing the same thing and not using his garbage disposal much.

Someone else commented that he likes having extra yard waste pickup because he has a high volume of it. Another person added that she likes being able to recycle food waste instead of using her worm bin.

WHAT PROBLEMS HAVE YOU EXPERIENCED WITH THE PROGRAM?

The major problems cited with the program include:

- Dissatisfaction with every-other-week pickup;
- Problems with odors and flies;
- Perceived inconvenience of having to sort out the items to be recycling.

One man expressed his dissatisfaction with the every-other-week pickup noting, "My trash can is overflowing by the end of the second week." A couple other participants also said they have too much trash by the time the pickup comes. Another person, who said he is often away from home , especially in the summer, worries about missing a week. He says that it is a hassle to work out arrangements with a neighbor to take care of the trash.

A woman who has pet cats said she would like an alternative for disposing of her two bags of used cat litter because they fill up the cans and leave very little space for other trash.

Most of the participants who do not like the food waste recycling program expressed their dissatisfaction by saying the program simply doesn't work for their household. Some said they already compost most of their food waste. Others said they do not have much paper food waste. Several were not willing to have a "smelly" container in their kitchen or to deal with the odors and flies that were drawn to the Compostainer. Some said the program is just "too much bother."

On person said he didn't like the way the program was placed on people with no compensation. He believes there should be some reward or compensation for those who do the food waste recycling: "Shouldn't we get a rebate on our garbage bill? I think if you want to sell this program to the larger population, there should be some incentive included with it."

A couple of people said they feel that they got less garbage collection for the same price.

There was confusion about whether it is possible to use two cans, or have a larger can, to use for the every-other-week trash pickup. Some live in homes located up long, steep driveways; these participants expressed concern about the number of cans they have to haul to the curb for their pickup.

HOW IS THIS A GOOD PROGRAM / WHAT CAN MAKE IT BETTER?

Why would you say this is a very good program?

Four members of the group raised their hands to affirm the food waste recycling program is "a very good program." Their positive responses reflected their opinions that:

- It is good to recycle more things;
- It is part of our recycling ethic.

What could be done to make the program better?

There were several suggestions for improving the program:

- Provide larger garbage cans for the every-other-week pick up.

- Have some incentive or reward for those who participate; people would be more willing to participate if they can see some savings for their efforts. It takes time to recycle and to teach family members how to recycle.
- Educate people about the program's benefits. People need to know how the recycled materials will be used. Many can understand bottle and can recycling, but the benefits of food recycling may not be known. Promote other benefits, such as reduction in truck traffic (though some in the group had difficulty understanding why this would be so).

CONCLUSION: WHAT ARE THE THREE MOST IMPORTANT CHANGES, IMPROVEMENTS OR MARKETING IDEAS YOU WOULD IMPLEMENT TO MAKE THIS PROGRAM A SUCCESS?

Ruth Anne:

- Retrofit people's kitchens, so that their garbage disposals send garbage to a recycling place.
- Have an informational fare in Lake Forest Park that explains the benefits of recycling.
- People need to be educated more about how to recycle, especially those in the older generations who did not learn recycling when they were young.

Jeff:

- Provide more education.
- Have weekly Compostainer pickup in the summer and fall to reduce flies and odors; in the spring and winter you can have pickups every other week or every 3 weeks.

Carol:

- Nothing would make the program workable for me because I have to haul the garbage cans a long way down a driveway; the fewer cans the better.
- Education might help others to participate.

Jeff:

- Have some sort of compensation for those who participate.
- I like Ruth Anne's idea of having an alternative to a disposal, like a vacuum waste system that we have on airplanes.
- Make it more convenient.
- Educate the public on the benefits of recycling and putting less stuff in landfills.

David:

- Do a better job of educating the public – why are we doing what we're doing?
- Garbage pickup was much more expensive in city than here – I think it's a bargain; people need to be educated about the deal they're getting; I'd rather pay less and take out my own cans.
- Provide compensation for those who recycle more.

Gerald:

- I don't have a problem with any of this; the system is OK.
- I believe in recycling; people need to be educated about it.

June:

- Have a deodorant for the kitchen container to reduce odors.
- Educate people about the expectation we recycle our own things and sell the benefits.
- (She added that she has ruined fewer utensils because she doesn't use her disposal any more.)

Melvin:

- There's not one thing you can do that will make me want to use the program. My wife will not have the small food waste container in the house; I'd rather take extra stuff to the transfer station.
- Education is the biggest way to get others to participate.

Kolden:

- He talked to his neighbors in two cul-de-sacs and the overwhelming response was, "It does not work for me." Lots of people said, "I hate it." He said they believe in recycling but they each gave a different reason for not liking this program:
    - Fruit flies and smells; doesn't use container in house.
    - Can't get kids to do it.
    - Program doesn't work for someone disposing of diapers.
    - I compost everything in my yard.
    - People don't like having a program forced on them by the city
    - Provide more education.

Kim:

- Provide more education.
- Put a deodorizer in the small container and a no pest strip in the Compostainer to get ride of the flies and odors.
- Let people use bigger garbage cans, if they want to.

John:

- Need something in container to reduce odor and flies.
- People should be able to use double-size containers for the same price for the every other week pickup.
- Give coupon for free trip to the dump once a year (like Seattle), in case a week is missed.

Appendix

Tabulations from Questionnaires
Discussion Guide

City of Lake Forest Park
Focus Group Discussion with Residents
Concerning Food Waste Recycling Program

1. In the last two days, how did you dispose of the following foods wastes? (Please put an "X" in all appropriate answers:

Food Waste	**Compostainer**	**Garbage Disposal**	**Garbage Can**	**Worm/ Compost Bin**	**Other**
Fruit	8	3	1	1	
Vegetables	8	3	1	2	
Meat & bones	8	1	4		Dogs
Dairy products	7	4	1		
Bread & Cereal	7	1	2	1	Chickens
Soiled paper/cardboard	8		5		

2. What has been the greatest difficulty in fully participating in the food recycling program?

5 Smells of containers
5 Fruit flies
2 No difficulties
Don't participate in program
Having to deal with a 4th can
Cumbersome to separate food waste, use disposal as first choice
Don't want extra container in the house, takes more time
Do not like small container, prefer to use milk cartons
Need weekly pickup in summer and fall
Garbage can gets too full & smelly because of cat litter – I live alone & recycle most things
Use my composter and garbage disposal exclusively; not enough other stuff to bother with. Also have a wood chipper.

3. How many people are in your household?

1 person - 2
2 people - 5
3 people - 3
4 people - 2

4. How many children under 18 are in your household?

   5 of the 11 participants have at least one child in the household.

   3 children - 1
   2 children - 2
   1 child - 2

5. Do you live in a single-family home, condominium, or apartment?

   All live in a single-family home.

City of Lake Forest Park
Focus Group Discussion with Residents
Concerning Food Waste Recycling Program
October 29, 2002
Discussion Guide

I. Introduction

A. Opening remarks - CB

B. Name, occupation, years living in Lake Forest Park

II. What was your initial response when you learned you were selected to participate in a pilot program for food waste recycling?

C. Did you know anything about food waste recycling before you were notified that you were in this program?

D. Was it easy to understand what you were expected to do?

E. Are you comfortable with all of the new terms (ASK PEOPLE TO PROVIDE THEM….LOOK FOR COMPOSTAINER, SOILED PAPER, FOOD WASTE, ORGANICS, WET WASTES)?

F. Did you have any difficulties getting used to the new procedures?

G. Do you use the mini container? Is it necessary for your participation?

H. Do you understand what happens to the material in the Compostainer after it is picked up?

III. Can someone give me an example of your routine now disposing of kitchen waste? Does anyone else have a different experience? (PROBE MEMBERS OF THE GROUP FOR THEIR INDIVIDUAL EXPERIENCES)

I. What are you putting in your Compostainer?

J. Is your routine the same every day and week, or does it depend on the garbage/collection schedule?

K. How do you know what goes in the Compostainer and what goes in the regular garbage?

IV. Now that you have several months' experience with this pilot program….

L. What do you believe works well with this program?

M. What do you see as problems with the way the program currently operates?

V. So, let's see a show of hands….how many of you would say that this food recycling program is great?

N. (ADDRESSED TO THOSE WHO RAISED THEIR HANDS) What do think is great about the program? (LOOK FOR OVERALL BENEFITS FOR THE INDIVIDUAL, AS WELL AS THE COMMUNITY)

O. (ADDRESSED TO THOSE WHO DID NOT RAISE THEIR HANDS) What would it take to make you say this program is great?

VI. What could be done to make this program better and make people want to participate in it?

VII. (Summary): I would like to summarize by letting each of you imagine that you are in charge of the food waste recycling program for King County, and you have been given the responsibility, money and authority to make this program a success. I am going to go around the table and ask each of you to tell me the three most important changes, improvements or marketing ideas you would implement to make this program a success.

VIII. Explanation of take-home Food Waste Record.

Thank you very much for sharing you ideas and opinions tonight.

Issaquah Organics Collection Pilot Monitoring
(all figures in pounds per household per month)

	April	May	June	July	August	September	October	November	December	Average
1 2001 Citywide Yard Debris	132.7	100.2	101.4	66.5	59.7	41.8	78.3	195.3	68.5	93.8
2 2002 Citywide Yard Debris	107.7	182.5	132.0	101.149	61.336	57.17	45.8	46.3	40.8	86.1
3 Annual Variation Coefficient (2)/(1):	0.811	1.821	1.301	1.522	1.027	1.368	0.585	0.237	0.596	0.92
4 2001 Pilot Route Yard Debris	48.0	104.1	83.3	82.4	89.4	75.9	71.0	68.0	32.3	72.7
5 2002 Pilot Route YD+FW	77.4	102.0	102.5	95.3	64.9	65.4	58.4	71.4	71.3	78.7
6 2001 Citywide SF Garbage	92.5	66.8	94.5	104.8	115.7	97.9	120.4	123.3	114.6	103.4
7 2002 Citywide SF Garbage	105.8	118.2	108.0	131.2	113.9	113.3	112.3	123.2	175.6	122.4
8 Annual Variation Coefficient (7)/(6):	1.144	1.771	1.142	1.252	0.984	1.158	0.933	0.999	1.533	1.18
9 2001 Pilot Route Garbage	97.1	72.3	106.4	115.8	112.4	101.5	74.2	73.8	65.2	91.0
10 2002 Pilot Route Garbage	96.4	72.7	66.5	75.1	114.2	85.2	114.4	86.7	64.6	86.2
11 Pilot: Calculated YD component	38.9	189.6	108.3	125.4	91.8	103.8	41.5	16.1	19.2	66.7
12 Pilot: Calculated FW component	38.5	-87.6	-5.9	-30.1	-26.9	-38.4	16.9	55.3	52.1	12.0

Kirkland Organics Collection Pilot Monitoring

(all figures in pounds per household per month)

		April	May	June	July	August	September	October	November	December	Average
1	2001 Citywide Yard Debris	124.4	176.0	120.9	104.9	95.1	79.0	94.9	137.6	51.7	109.4
2	2002 Citywide Yard Debris	146.8	185.3	147.2	137.1	82.5	82.6	97.7	152.7	67.2	122.1
3	Annual Variation Coefficient (2)/(1):	1.181	1.053	1.218	1.307	0.867	1.045	1.030	1.110	1.299	1.12
4	2001 Pilot Route Yard Debris	243.6	232.7	219.1	190.9	154.6	158.9	154.4	231.8	83.9	185.5
5	2002 Pilot Route YD+FW (RT 699)	178.1	216.3	192.2	118.0	87.4	93.5	93.0	150.2	79.2	134.2
6	2001 Citywide SF Garbage	151.8	172.4	157.1	171.6	171.0	150.3	165.4	169.8	162.6	163.6
7	2002 Citywide SF Garbage	138.8	150.0	144.4	163.5	145.9	140.0	144.2	139.0	149.4	146.1
8	Annual Variation Coefficient (7)/(6):	0.914	0.870	0.919	0.953	0.853	0.931	0.872	0.819	0.919	0.89
9	2001 Pilot Route Garbage	156.5	150.4	266.5	161.4	162.2	168.4	158.7	183.9	167.1	175.0
10	2002 Pilot Route Garbage (RT 313)	125.0	144.7	163.3	157.3	153.8	141.3	139.9	148.9	141.8	146.2
11	Pilot: Calculated YD component	287.6	245.0	266.8	249.5	134.0	166.1	158.9	257.3	109.0	207.1
12	Pilot: Calculated FW component	-109.5	-28.6	-74.6	-131.5	-46.6	-72.6	-66.0	-107.0	-29.8	-72.9

Redmond Organics Collection Pilot Monitoring

(all figures in pounds per household per month)

		April	May	June	July	August	September	October	November	December	Total/Avg
1	2001 Citywide Yard Debris	117.5	183.2	137.5	126.9	101.1	93.1	115.8	155.7	47.3	119.8
2	2002 Citywide Yard Debris	165.2	199.6	173.3	140.0	92.7	78.5	98.7	145.8	51.3	127.2
3	Annual Variation Coefficient (2)/(1)	1.406	1.090	1.261	1.103	0.917	0.843	0.852	0.936	1.085	1.06
4	2001 Pilot Route Yard Debris	n/a	190.4	189.5	128.4	120.8	147.8	97.9	89.2	59.4	127.9
5	2002 Pilot Route YD+FW (RT 691)	189.3	216.4	222.9	143.4	89.0	95.3	95.8	158.2	128.2	148.7
6	2001 Citywide SF Garbage	132.0	146.7	146.8	143.6	147.6	133.2	146.7	141.3	123.6	140.2
7	2002 Citywide SF Garbage	133.5	137.6	125.3	149.2	133.6	132.8	132.5	120.2	143.6	134.3
8	Annual Variation Coefficient (7)/(6)	1.011	0.937	0.853	1.039	0.905	0.997	0.904	0.851	1.162	0.96
9	2001 Pilot Route Garbage	n/a	126.3	129.8	151.8	138.4	142.7	133.6	128.3	133.1	135.5
10	2002 Pilot Route Garbage (RT305)	112.2	114.6	123.0	122.7	130.2	125.8	113.0	118.6	114.9	119.5
11	Pilot: Calculated YD component	n/a	207.5	238.8	141.6	110.8	124.6	83.5	83.5	64.4	135.9
12	Pilot: Calculated FW component	n/a	8.9	-15.9	1.8	-21.8	-29.3	12.3	74.7	63.8	12.9

Lake Forest Park Organics Collection Pilot Monitoring

(all figures in pounds per household per month)

		May	June	July	August	September	October	November	December	Average
1	2001 Citywide Yard Debris	115.8	85.4	45.1	38.9	45.1	60.6	85.5	39.4	64.5
2	2002 Citywide Yard Debris	130.4	91.9	59.4	74.5	63.3	73.4	77.1	54.3	78.0
3	Annual Variation Coefficient (2)/(1)	1.126	1.076	1.316	1.914	1.405	1.212	0.901	1.377	1.21
4	2001 Pilot Route Yard Debris	44.3	37.8	37.5	42.5	37.8	34.8	76.7	33.8	43.1
5	2002 Pilot Route YD+FW	120.6	98.6	110.5	69.5	58.5	77.2	81.8	49.8	83.3
6	2001 Citywide SF Garbage	118.7	115.4	118.4	125.9	115.3	115.4	118.6	114.5	117.8
7	2002 Citywide SF Garbage	117.7	109.6	116.7	126.6	115.0	117.7	104.3	125.4	116.6
8	Annual Variation Coefficient (7)/(6)	0.991	0.950	0.985	1.005	0.997	1.020	0.879	1.096	0.99
9	2001 Pilot Route Garbage	120.7	112.9	121.8	128.0	108.7	130.4	125.0	102.5	118.7
10	2002 Pilot Route Garbage	118.7	103.6	121.3	106.4	85.2	72.4	97.1	93.0	99.7
11	Pilot: Calculated YD component	49.9	40.7	49.3	81.4	53.1	42.1	69.1	46.6	52.2
12	Pilot: Calculated FW component	70.7	57.9	61.1	-11.9	5.4	35.1	12.7	3.2	31.1

Attachment I

RESIDENTIAL FOOD SCRAP COLLECTION & RECYCLING PROGRAMS

SELECT INTERVIEWS WITH JURISDICTIONS ACROSS THE U.S. & CANADA

FINDINGS AND RECOMMENDATIONS

Report prepared for
King County Solid Waste Division

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TASK

To interview other jurisdictions (cities, counties, sanitation districts, etc.) operating residential food scrap collection and recycling programs around the U.S. and Canada about outreach efforts, data collection and program challenges. Specifically, the goal was to discover what education and promotion strategies were being used, how they were working, what changes staff would make (if any) and outreach plans for the future.

A contact list and questionnaire were developed. Background information on individual programs was obtained primarily through websites and archived industry publications. Telephone interviews were conducted during the month of January 2003 with the following communities or entities: Chittenden Solid Waste District, Vermont, California programs including: San Francisco, Castro Valley Sanitation District, Pleasanton, San Leandro and Alameda and the Alameda County Waste Management Authority. In Canada, the following programs were contacted: Toronto, Ontario, Ottawa, Ontario, Hailfax, Nova Scotia and Prince Edward Island. Partial information was found about the program in Markham, Ontario.

FINDINGS

Program Set-up

Based on the interviews and information found on corresponding websites, the most successful food scrap recycling programs are those using a wheeled cart and kitchen pail with a lid and handle (with or without a liner). They offer weekly collection of yard waste, soiled paper products and food scraps.

Liners are preferred by participants when asked about them, but don't seem to make a difference in overall participation rates. If given the choice, participants would choose to have liners. Most communities provided some type of liner as part of a pilot program to see if they made any difference in participation or diversion rates, but few have provided them when the program goes community-wide. Instead, most have opted to make liners available for purchase either through local retail outlets or by phone order and provided alternative ideas (reusing paper grocery sacks, wrapping with newspaper, freezing, etc.) for keeping the pail clean without the use of a liner. Offering two sizes of containers (pails especially) was suggested by several communities as a way to make the program more attractive to some folks. The majority of communities however, offer just one size and no major problems have been reported. Conveying to people that use of the pail is optional and suggesting other containers (i.e. empty milk cartons) was another suggestion for participants who didn't want to use a pail.

Fall (mid-to-late October) and spring (March or April, preferably after school spring breaks) are the most popular times to launch programs. They are prior to extreme weather months and do not conflict with major holidays or school breaks. After initial start-up promotions, most programs average direct contact with participants on a monthly or quarterly basis. Ideal contact seems to be monthly in some form (indirect on a monthly basis, direct on at least a quarterly basis).

Outreach Methods and Materials

Education and promotion efforts were identified as the single biggest determining factor in the overall success of a program. Program managers interviewed were emphatic about the importance of starting promotions early (one month prior to start date at a minimum), planning for broad-based promotions and budgeting to provide on-going education and promotion efforts. The single biggest regret most program managers had was not starting outreach early enough and not doing enough of it.

Some communities hosted information meetings or open houses prior to the start. Most experienced low turnout and would not recommend them unless they were required. An alternative would be to participate at an existing event that many residents would already be attending (school fair, farmer's market, etc.) Go to participants with the message; don't expect them to come to you.

Most communities use direct mail to participants at the start, but then rely primarily on media attention and other indirect methods of contact for long-term promotions. On-going, regular contact was mentioned frequently as important in a program's success. Most program managers said they would increase the frequency of contacts a participant has with the program – especially after the initial start. Some programs have seen a slight decline in participation after the initial start. The cause is unclear. A natural seasonal flux, seasonal changes in living habits (i.e. travel/dining out more) or change in attitude were all suggested as possible reasons.

Monthly contact in some form seems to be the minimum most program managers think participants need. This contact can be minor and could come from a variety of sources – postering, community events, newsletters (business, chamber, non-profits, government, media attention, signage (bus, truck, billboard, etc.) or public speaking/presentations. Press releases can be issued at specific program milestones; when certain participation and diversion rates have been achieved, when new materials are added to any part of the recycling program, when landmark tonnages have been reached, or when the first batch of compost is sold, bagged or goes to market. Use any new announcement about anything garbage or recycling-related as a time to further promote the program.

The majority of communities have taken a fact-based, simple approach when designing their educational materials (versus cartoony or humorous). Most have used straightforward titles and wording ("Food Scrap Recycling" has been most popular). Communities who developed single color, "copier" quality materials were disappointed with the look and would spend the extra time and money upgrading the materials in the future. Text has been a challenge for many program managers, balancing the desire to give detailed info on acceptable and non-acceptable materials versus being too specific or wordy and ending up with cluttered pieces. Most program managers said the goal is to provide simple, easy-to-follow instructions with clear, visual graphics. Several contacts mentioned the importance of including the benefits of participating (financial, environmental, civic) in educational materials, providing incentives for participation (variable can rates, discounted compost, random prizes, etc.) and getting the support of local politicians, media and haulers.

Most communities printed materials in English only. San Francisco has multiple language issues to consider so they moved toward mostly graphic print pieces, but continue to print each piece in three languages (English, Spanish and Chinese). Toronto chose instead to print several versions of each piece (English, French and Braille).

At a minimum, the following outreach materials for each household were most common:

Toter/cart label (including program name/logo, hauler name, phone number, website address and list of general materials accepted).

Pail label (listing acceptable/not acceptable items, program name/logo, phone number and website address).

Instruction brochure or flyer appealing enough to post or keep for future reference. Contents should include: overview of program, list of acceptable/not acceptable items, plenty of graphics or photos of containers and acceptable items, sponsor and contact info, benefits of participating, incentives, brief description of what compost is, how it is made and why it is important for individual, community and environment.

Toter/cart hang tag or doorhanger introducing program (optional, but could be used during delivery as a way to introduce program).

Toter/cart hang tag for problems (a checklist-style tag for drivers to leave behind if there are any contamination or collection issues).

Collection calendar (lists collections for the coming year. Provided once a year via mail, website and/or email).

Hotline or other reliable phone contact (some communities have established a "Rotline").

Website with updated info (a valuable tool, easy-to-update and available to participants 24 hours a day). All program materials (brochures, flyers, letters, calendars, etc.) should be made available on this site.

The most successful programs made the most of media communications, issuing press releases on a regular basis and setting up media photo opportunities. Several communities use the following schedule for media contact (issuing press releases, meeting with editorial boards, setting up photo opportunities, etc.):

Pre-program start (4-6 weeks prior to start date)

During cart/pail delivery (2-3 weeks prior to program start)

At program start (kick-off event, ribbon cutting and/or media photo opportunities).

At milestones (anniversary (one month, six months, one year, etc.) participation rates, diversion rates, when first batch of compost is ready, when something significant about program changes (new material accepted, hotline/website added, etc.), when awards or recognition are received.

No program interviewed as part of this report targets materials to a specific person in a household. In addition, the general materials used provide most participants with enough info on how to set up the program inside their homes. If not, most questions are resolved via a phone conversation with the participant.

Data Collection/Program Monitoring
Very few communities are doing detailed data collection beyond monitoring participation rates and diversion rates. In some programs, drivers have counters and participation rates are derived from those numbers. In other programs, staff goes out ahead of a collection truck, counts the number of carts set out and lifts the lid to do a visual check for food scraps. No poking is allowed. If no food scraps are seen, the cart is not counted. This type of monitoring can occur quarterly or semi-annually. It seems to occur more frequently at the start of a program and then tapers off as the program becomes more established. Typical participation rates ranged from 25%-40%. Diversion rates were around 30%.

No one I spoke with is performance testing any promotional materials per se, nor do any have plans to in the future. Several communities have asked questions about recall and retention of specific educational pieces during phone surveys or opinions on usefulness of various methods (for example, which method a person would prefer -- door-to-door campaign versus a newsletter).

Program Challenges
Overall, no one I spoke with was experiencing serious problems with their programs. Challenges were typical and fixable. The "ick" factor (odors and pests), no time and already home composting were major reasons for not participating. For people that called or contacted staff with complaints or questions, most were about smell, storage issues (where to put the cart) or a request for liners or liner alternatives. Communities responded to these challenges by providing suggestions and alternatives and in some cases, liners.

RECOMMENDATIONS

Pilot Promotion Strategy
Based on phone conversations and research, I have come to the conclusion there is nothing inherently flawed with the pilot programs. Participation, for the most part, is being hampered by the fact no broad-based outreach can be done and existing yard waste toters cannot be relabeled. Due to the small scale and short duration of these pilots, many of the outreach tools that would be used in a full-scale program are not available for these programs. According to Jack Macy (San Francisco), a reasonable participation rate to expect from a large, full-scale voluntary program would be around 20-35%. This number seems to be supported by other full-scale, voluntary programs reviewed. 10% participation in the King County pilots did seem low to him, but not unreasonably low given the circumstances and limitations.

To complete these pilots and try to increase participation, monthly or bi-monthly direct contact with participants seems the best route. This could be managed via direct mail (in the form of a postcard or flyer), phone banking, email newsletters (see note) or possibly a door-to-door campaign.

Note: downside to email is that addresses can change frequently, no forwarding addresses are provided and mailboxes may not be checked regularly, etc. Easy once list is set up, though and cheap.

Direct Contact Ideas
The quickest and most economical outreach method would probably be direct mail via a series of postcards or small flyers. Pieces should be large and colorful enough to attract attention, but don't need to be overly expensive in design or production. If design and layout of existing materials seem to be working, use those as guides. Consider the following suggestions:

Develop a set of postcards (or flyers); send at regular intervals. Each piece could focus on a specific topic and include tips for easier participation and suggestions for dealing with problems. Some topic ideas include:

- Spotlighting acceptable materials (i.e. one postcard or flyer could focus on soiled paper products, list acceptable materials, preparation tips, common problems/mistakes, suggested solutions, etc.). Repeat for other acceptable materials (for a total of three pieces).

- Tips for dealing with odors, pests and other common problems.

- Discussing ways to gradually move into program or tailor to suit individual needs. Encourage people to gradually step up participation as they feel comfortable. Encourage them to start adding soiled paper products to the cart first, then graduating to firmer food scraps before tackling the more liquid scraps. Give alternative ideas for pails and liners.

Set up presentations or send out informational packets to area experts such as city/county staff, compost facility staff, hauler customer service staff, recycle truck drivers, Master Gardeners, Master Composters and/or Master Recyclers, garden clubs, docents from Bellevue Botanical Garden, staff from local farms, farmer's market personnel, etc.. Solicit their help in talking up pilots and answering questions with participants they may come in contact with. Also consider service organizations, scouting organizations and students as potential people to help get the word out.

Consider a door-to-door campaign to increase participation. Use staff or experts listed above to conduct campaign.

Re-label yard waste carts (if possible).

Other direct contact ideas to consider:

Give participants a bag of compost (sample or standard size). Add a packet of seeds (sweet peas can be planted anytime after mid-February, other seeds need to wait until after last frost or be started indoors) or a plant start to go along with the compost as a thank you for participating or as encouragement to give the program a try.

Mail participants a liner and suggest alternatives (paper grocery bags, newspaper, etc.) for after they have used the liner.

Hold a random drawing of participants. Giveaway ideas:

- Give tickets to the Northwest Flower & Garden Show (mid-February in Seattle) or local home shows.
- Garden/compost tools or supplies, backyard bins, gift pack from local companies.
- Gift certificates from local merchants (retail, home improvement, local businesses in pilot area, nurseries, or maybe give discount to be applied to garbage bill.

Set up a phone bank in pilot areas and conduct a brief survey. Lead in with an introduction, then ask if pail has been received. Depending on how they answer, continue as follows:

If they answer yes and are using the pail, ask a few pre-selected questions about participation and how they like the program.

If they answer yes, but are *not* using the pail, ask another set of questions to try to find out why and help them start participating.

If they answer no, offer to deliver another pail and info to get them started.

Direct mail or email a follow-up thank you for answering questions. Perhaps include a coupon for compost discount or liner discount, etc.

Full-Scale Program Promotion Strategy

Promotions for the most successful programs started about one month prior to program start and included regularly scheduled outreach. The promotions were broad-based and long-term. A variety of outreach methods are possible. Time and budget considerations will determine which suggestions can be used. This implementation strategy assumes a program name and any logos, tag lines, colors choice and overall tone and style of materials have already been determined (or perhaps may be existing from pilot programs). Focus groups could be used to help make these decisions or make changes to existing materials.

In addition, all of the suggestions made for the pilot program above could easily be used in a full-scale program. At a minimum, the following outreach efforts should be made to get the program started.

About one month prior to program start:

Issue a press release to area media (including daily/weekly newspapers, free community papers, magazines, radio and television stations, appropriate organizations that produce newsletters, schools, etc.). Schedule meetings with editorial boards.

Direct mail a postcard or letter. Most contacts to date have kicked-off full-scale programs with a direct mail piece (most often a color brochure or intro letter) sent 3-4 weeks (max.) prior to program start. This piece should attract attention and include the program name, logo (if any), brief description of program (who can participate, how it will work, delivery/start dates, etc.). Media feature stories, articles in community, business or government newsletters coincide. *Reminder: most program managers talked about keeping text clear and simple and using visual graphics.*

About one-two weeks prior to program start (depending on size of program and lead-time for delivery):

Deliver containers. Include an instructional brochure inside the kitchen pail (with yes/no label already on) at delivery. Suggestions have been made to deliver pails as quickly as possible (all pails out within a one-two week time frame, if possible). Allow enough time and personnel to quickly deliver pails, but also be able to make one-on-one contact with people if opportunity presents itself. Educate recycling drivers and staff about program and provide problem tags for drivers to leave behind when problems occur.

Issue a second press release. Consider organizing a kick-off event (especially for first pilot to go city-wide), ribbon cutting or media photo opportunity prior to, or during, pail delivery. Photo opportunities could include photos of massed carts or pails waiting to be delivered or containers being delivered.

At program start:

Issue a third press release. Organize media photo opportunities (truck on route, etc.)

Send collection calendars.

Begin paid advertising (if planned).

Follow-up effort 2 weeks – 2 months post start. Two weeks to two months (depending on collection frequency) after carts and/or pails have been delivered, some type of follow-up education and promotion effort should be considered. Efforts in other communities have included follow-up mailers (CVSWD send a magnet postcard), doorhangers, doorbelling campaigns, phone banking or a quarterly newsletter. San Francisco has done neighborhood campaigns that have included door-to-door follow-up and phone banking. Some communities have not done targeted follow-up, but instead used general media releases, posters, community/business/government newsletters or community events to further promote program.

If set-outs are being tracked, a postcard or flyer could be developed to target households not participating in the program. It could be titled "We've noticed…" or "Can we help?" and could

offer suggestions for getting started in the program or contact information for questions or concerns.

In addition, a hotline number (or "Rotline" as they call it in many places in California) or some other reliable contact number should be established for participants to call with questions or concerns. Websites should be updated with current information. Paid advertising should be considered and space reserved. Focus groups and surveys (via email, mail or phone) should be regularly scheduled (1-2 times per year in the beginning).

The following are additional outreach ideas:

Imprint magnets or other promotional items such as cloth bags, water bottles, etc. and distribute to participants at community events or use as giveaways in random drawings.

Imprint t-shirts or hats (made from organic cotton) with appropriate message. Distribute to staff and front people for program (delivery staff, drivers, customer service staff, etc.). Use as giveaways in random drawings or at community events.

Produce posters and post in all government buildings, post offices, groceries, nurseries, home improvement/hardware stores, community bulletin boards, schools, churches or banks. Any place that will post it in a window, on a wall or bulletin board is an opportunity to promote the program and build name recognition.

Involve the following retailers in helping promote the program:

Grocery stores could imprint paper bag with logo and info, display posters, host displays/staff Q&A.

Pizza delivery businesses could imprint boxes with recycling message or include a hang tag/flyer with pizza delivery in service area, display poster.

Dairy companies could imprint containers with recycling message (probably only once program covers a large enough area). Consider local dairies that deliver in limited area (Smith's?). If container imprint is not feasible, perhaps shelf tags or container stickers could be installed or attached at groceries identifying milk cartons (and other dairy cartons) as recyclable in the program.

Produce signs and install on garbage, recycle and compost trucks, buses (both inside and out); consider billboards.

Develop an email newsletter – mail monthly or quarterly with tips, hints, links, giveaways. Coincide with mailed newsletter.

Set up an automatic collection reminder via email and include additional hints and tips in addition to collection reminder.

Develop a portable display(s) or kiosk materials. Display in area malls, retail outlets, schools, government buildings, etc.

Participate in local community events (fairs, festivals, parades, farmer's markets, school events, HHW round up days, compost bin sale events, trade shows).

Organize a speaker's bureau, make presentations at appropriate events such as local nursery workshops, civic group meetings, PTA meetings, garden clubs, school events, community events, workshops and conferences, etc.

Produce a school program (for use either in-class or at assemblies).

Plan give-aways, random drawings or other contests. Giveaway compost, seed packets, bulbs, plant starts or other compost, garden, home improvement or food-related items – like pizza).

Final Comments

Overall, food scrap recycling programs seem to be working. Participants, in general, respond favorably to the programs and find ways to make the program work for their individual households. Participation rates (average around 35% in U.S.) and diversion rates (average around 30% in U.S.) seem to satisfy most program managers, although there is room for improvement in all.

Designing a program that is easy-to-use and convenient for participants, and planning to provide on-going education and promotion are key to a program's long-term success. In addition, educating participants about the benefits of the program and providing incentives (financial, mainly) are also helpful.

As for the contacts themselves, all were helpful and friendly. Each of them spent a *minimum* of thirty to sixty minutes on the phone, talking about their programs and answering questions - willingly. After the first few contacts were made, I realized this is a small and unusual group of people working together to further a cause they believe in and want to see succeed in the mainstream. They were eager to share information and learn more about what was working for other programs. Many are trying programs, techniques and methods for the first time. All were generous in supplying whatever additional materials they had via email or regular mail. I did not meet anyone not willing to talk about their program or provide additional information. The few people I left multiple messages with or didn't reach at all were in the middle of full-scale implementation. I assume they were simply too busy to talk, but would at a later date. All of the contacts wanted to remain in touch and know how King County's program turns out.

APPENDIX A

Residential
Food Scrap Collection & Recycling
Matrix

January 2003

Meucci Consulting, 445 16th St, Bellingham, WA 98225

Residential Food Scrap Collection & Recycling
Program Matrix

CITY/JURISDICTION/ PROGRAM NAME	COLLECTION FREQUENCY	PILOT/FULL SCALE # PARTICIPANTS	CONTAINERS PROVIDED/ TECHNOLOGY	ACCEPTED MATERIALS
Castro Valley Sanitation District (CVSD), CA "Food Scrap Recycling"	Weekly (both pilot and full-scale)	Pilot: 11/01 1,000 SFR Full-scale: 4/02 16,000 SFR	"Green" cart 2 gl. pail with lid and handle. AG BAG system (Gilton, CA)	Yard Waste Food Scraps Soiled Papers
San Francisco, CA Fantastic Three – Compostables	Weekly (both pilot and full-scale)	Pilot: 4/99 2800 SFR Full-scale 2/00 (currently implementing): 100,000 as of 1/03. 200,000 total	"Green" cart 2 gl. pails with lids and handle (liners used in pilot, not full-scale) Aerated static pile	Yard Waste Food Scraps Soiled Papers
Pleasanton, CA "Food Scrap Recycling" Program	Weekly (both pilot and full-scale)	Pilot: 9/02 900 SFR – 1 area Full-scale: 4/03 (planned) 18,000 SFR	"Green" cart 2 gl. pail with lid and handle. AG BAG system (Newby Is., CA)	Yard Waste Food Scraps Soiled Papers
San Leandro, CA "Food Scrap Recycling" Program	Weekly	Full scale: (currently implementing) 12/02 13,000 SFR (60%)	"Green" cart 2 gl. pail with lid and handle. AG BAG system (Newby Is., CA0	Yard Waste Food Scraps Soiled Papers

Alameda, CA "Food Scrap Recycling Program"	Weekly	Pilot 10/02 Full scale 1/03 ?	"Green" cart 2 gl. pail with lid and handle. AG BAG system (Newby Is., CA)	Yard Waste Food Scraps Soiled Papers
Chittenden Solid Waste District (CSWD), VT "Residential Organics Recycling Project"	Biweekly (Jan.-May) Weekly (May – Aug.)	Pilot: 1/00 (ended 8/00) 265 SFR (invitation only)	"Green" cart 2 gl. pail with lid and handle. Open air windrow	Yard Waste Food Scraps Soiled Papers
Ottawa, Ontario, CANADA "Compost Plus"	Weekly	Pilot 10/01 (runs until 5/04). 5300 SFR (over 9 routes)	"Green" cart Mix of pails/bags being tested. Open air windrow	Yard Waste Food Scraps Soiled Papers
Halifax, Nova Scotia, CANADA "Organics Green Cart"	Alternate EOW with garbage.	1998 (phasing in) 110,000 SFR	"Green" cart Pail with lid and handle. ?	Yard Waste Food Scraps Soiled Papers
Prince Edward Island, CANADA "Waste Watch – Green Compost Cart"	Alternate EOW with garbage.	Full-scale 2002 55,000 SFR	"Green" cart Kitchen mini-bin Static aerated; enclosed containers	Yard Waste Food Scraps Soiled Papers
Markham, Ontario, CANADA	Weekly	Pilot (April '01 – March '02) 600 SFR	"Green" cart Pail with lid and handle Kraft bag ?	Yard Waste Food Scraps
Toronto, Ontario,	Weekly	Full scale 9/02	"Green cart"	Food Scraps

CANADA		120,000 SFR by Summer '03	Pail with lid and handle. Anerobic digester	Soiled papers

APPENDIX B

Residential Food Scrap Recycling & Collection

Program Summaries & Findings

January 2003

Meucci Consulting, 445 16th St., Bellingham, WA 98225

PROGRAM SUMMARIES & FINDINGS

Chittenden Solid Waste District (CSWD), Williston, VT. (PILOT)
"Residential Organics Collection Project"
Contact: Nancy Plunkett, Waste Reduction Manager
(802) 872-8100 ext. 222 - nplunkett@cswd.net
www.cswd.net

Program Overview
The Chittenden Solid Waste District (CSWD) in Vermont conducted a pilot curbside food scrap collection program in three Chittenden County neighborhoods. The project ran from October 1999 to May 2001. Invitations to participate (letter format on CSWD letterhead with postage-paid return postcards) were mailed to 558 households. A door-to-door follow-up campaign that included a simple flyer was also conducted after the invitations were mailed. A total of 265 participants agreed to participate (47% of those invited). A follow-up thank you letter and pre-pilot survey were then sent. If surveys were not returned, a follow-up letter and second copy of the survey was sent.

Each participant received a 65-gallon aerated cart and 2.5-gallon kitchen pail, both with labels. The pail label included information on acceptable and non-acceptable materials. Half of the participants also received compostable pail liners. Materials accepted included non-recyclable paper products, food scraps and yard waste. Phase one collection occurred every other week from January through April 2000. In April, the program was extended and ran through August 2000 with weekly collection. Of the 265 original participants, 203 agreed to continue on through the summer. The top three reasons for not continuing included issues with odor, going away on vacation and generating volume too small to warrant participation (based on participant's interpretation).

The program was called the "Residential Organics Collection Project." According to staff, this title was confusing for many people – especially the word "organics." In the future, they said they would most likely use the word "composting" instead.

The program was voluntary. Incentives to participate included the opportunity to have yard waste collected (not available otherwise) and to do something good for the environment.

Outreach Methods Used
In addition to the initial invitations, door-to-door campaign/flyer, thank you letter, pre-pilot survey and container labels, CSWD also developed several other education pieces. An instructional brochure (8 1/2 x 11, tri-fold) was enclosed in the pail at delivery. Four postcards were also developed. One was a reminder about the date of the first collection, the second reminded those participants who had been given liners to remember to use them, a third was titled "Summer Tips" and the fourth was a reminder about the last collection date. A cart reminder tag (titled "Oops!!") was also developed to hang on the cart if there was a problem with materials or collection.

About a month into the program a letter was sent to anyone who had not set out materials during the first two collections. The letter included information about collection dates and times and provided contact info for questions. Also at about the one month mark, another letter was sent informing participants that the program was going to be extended another four months. A postage-paid return postcard was included for participants to acknowledge whether they would like to continue on with the program or not.

After the postcards were received and a total participant tally was made for phase two, another letter was sent announcing the extension of the program through August. As a thank you at this point in the pilot, free bags of compost were made available to participants. At the end of the project, a post-pilot survey was sent out.

All of the materials were simple in design and content. The brochure was printed black ink on yellow paper with a few simple graphics. The postcards were laid out in a similar fashion. In a permanent program, staff said they would invest more time and money in upgrading the look and content of their educational materials. They would use fewer words, more visual graphics and print in color. The style and type of materials generated seemed to work for participants (i.e. fold out brochure, postcards and direct mail as method of contact). Outreach materials were not designed to target a specific individual in a household. CSWD staff also felt providing the basic acceptance requirements was sufficient.

An initial press release was sent to area media in November 1999. A follow-up one was sent in December 1999. A short blurb also appeared in the local school newsletter. The CSWD Fall 1999 newsletter included a short piece about the start of the program. A third press release was sent in April announcing the extension of the program. News articles ran in the four local papers. Monthly contact of some sort is what CSWD would prefer in a future program, whether that is via a media article, radio ad, bus/truck signage, newsletter, direct mail or community event, etc.

Data Collection/Program Monitoring

A total of 47.7 tons of material was collected from participants during the pilot. There were no significant contamination issues and compost quality was good. During phase one when yard waste was not being generated, an average of 7.6 lbs. per household/week was being collected. Set out rate during phase one was 82%, half of the time. When yard waste was being collected, an average of 16.6 lbs. per household/week was collected and set out rate increased to 87%, half of the time.

A pre and post pilot survey was conducted. Results indicated strong support for a permanent program. Compostable liners didn't seem to make a difference in set-out rate, though when asked most participants said they would prefer liners if the program was permanent. There were no major collection or processing issues and the resulting compost (using a windrow method) was marketed along with the compost facility's standard compost. Most participants would prefer a weekly collection program. Most respondents read the brochure and kept it for future reference.

CSWD staff tracked participation and diversion rates only during the pilot. Education and promotion materials were not performance tested nor would they plan to test in a permanent program.

Participant Challenges/Program Issues
The issues CSWD staff dealt with most frequently with participants included requests for more liners, questions about acceptable materials, fear of attracting pests (animals and insects) and odors (especially during EOW collection and warmer months). Some reasons given for not participating included:

- Participants had no time (suggested solution: no different than putting it in garbage, just the container next door to the garbage can),
- Already compost at home (suggested solution: great, then just add soiled papers, meat/dairy to the "green" cart),
- Use garbage disposal (fine, then just use program to recycle soiled paper, larger items),
- On vacation or moving,
- Don't generate enough materials; and
- Lack of space for yard waste cart.

Solutions to some of these issues were made available to participants via direct phone calls, during the door-to-door campaign and via outreach materials.

Additional Comments
Nancy Plunkett was helpful and enthusiastic and provided detailed information. Although their full-scale program is in the future, she was generous with her time and offerings of additional contacts and information. Overall, CSWD felt the program was a success. Important to review material understanding that this was a small-scale, invitation-only program that generated a 47% response (of those invited). Participants were volunteers willing to participate. It makes the findings hard to apply to large-scale programs with general populations. The biggest challenge facing CSWD now is the initial cost of overhauling their current system and setting up a new one (curbside collection of yard waste is not currently offered).

For more information
Final Report – May 2001
"Residential Organics Collection Project" - Brochure (January–April 2000)
"Residential Organics Collection Project" - Postcard "Summer Tips"
"Residential Organics Collection Project" – Pail Label
CSWD Cart Label
Appendix A: Educational Materials and Survey Forms
Appendix B: Press Releases and Articles
Collecting Organic Wastes – Case Studies report for King County, WA, June 7, 2001
Notes from phone conversation with Nancy Plunkett, 4/20/01
Also see the following articles:
Resource Recycling, November 2001, "Examining collection of all residential organics"
Biocycle, March 2001, "Evaluating Residential Organics Collection Pilot"
Biocycle, January 2000, "Food Residuals Residential Collection Pilot" (Regional Roundup)
Also check www.jgpress.com for archived *Biocycle* articles.

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Nancy Plunkett presented on the project at the August 2000 *Biocycle* conference in Burlington, VT.

California Programs

Note: While not mandatory, all programs in California are supported by "Measure D" which requires a 75% diversion rate by 2010.

San Francisco, CA (Full scale rollout underway - 1/03)
"Fantastic Three – Compostables"
Contact: Jack Macy, Program Administrator
(415) 355-3751 - jack.macy@sf.gov.org
www.sfenvironment.com

Program Overview
San Francisco is rolling out the largest, full-scale residential food scrap and yard waste collection program in the U.S. The rollout began in February 2000 after a number of pilots over the previous two to three years. The program provides residents with a "green" cart for weekly collection of yard waste, food scraps and soiled papers. As of January 2003, 100,000 households were part of the program. Participants also receive a 2-gallon kitchen pail with lid and handle. Liners were part of the pilot program, but are not provided as part of the full-scale program, due to high cost. Instead, alternative liner suggestions (bags, newsprint, etc.) are made and ways of packaging wet/smelly items are provided to residents. Liners can be purchased by residents at a variety of local retail stores.

The pilot program was called "Composting Collection – Food & Yard Waste." It is now referred to as the "Fantastic Three" and the "green" cart is referred to as the "compostables" cart. The name seems to work for residents. A significant amount of media attention was given to the program when it was started, aiding in people recognizing and getting use to the new name. No major issues with the name were mentioned.

The program is voluntary. Incentives to participate include the opportunity to recycle yard wastes (not offered prior), reducing the size of the garbage can, realizing savings and doing something good for the environment.

Outreach Methods Used
Two weeks prior to the start of the program, a letter with a note from the mayor was sent to participants announcing the program. Carts (with labels) and kitchen pails were then delivered. A program brochure (one piece with text in English, Spanish and Chinese) was included inside the pail, which also had a label on the lid listing acceptable and non-acceptable materials. A press release was sent out and articles appeared in community newspapers and newsletters.

After the initial rollout of 20,000 households, the intro letter was replaced with a postcard (without a note from the mayor). The brochure has also been edited and includes less text and

more graphics to reduce the amount of text and help with language barriers. Staff emphasized the importance of educational materials with clear, easy-to-follow instructions and good graphics. San Francisco also used phone banking as a way to find out if carts/pails had been received and whether they were being used. It also provides an opportunity to answer questions, dispel misconceptions and provide suggestions for problems.

Occasional neighborhood campaigns are also undertaken, where staff either go door-to-door or utilize phone banking. When they go door-to-door, staff asks how the program is going and provides literature (flyer) or leaves a flyer behind if no one is home. No major new outreach methods are planned at this time. When changes are made to any part of the program, they plan to use those times as opportunities to promote the food scrap segment. They are planning to continue using the outreach methods that have been working the past couple of years.

All outreach pieces are full-color with plenty of photos. The style and tone is simple and straightforward. Outreach materials were not designed to target a specific individual in a household. Staff also felt providing the basic acceptance requirements was sufficient. They tried to incorporate as many ideas for collecting materials as they could (i.e. wrapping in newsprint, using bags and milk cartons, etc.).

Data Collection/Program Monitoring

Data collection at this point is more anecdotal rather than systematic. The participation rate was 40% as of April 2001. At this point, San Francisco thinks they are sustaining a good participation rate, but they feel there is a need for on-going phone banking and media attention to keep participation numbers up. The diversion rate is 46-50% as of April 2001. A general program survey is scheduled for February 2003. Focus groups and surveys have also been utilized in the past.

Promotion efforts have not been performance tested per se, but they have tracked tonnages before and after a neighborhood campaign has been conducted and seen a 10% or more increase in participation as a result.

Participant Challenges/Program Issues

No major challenges or issues are facing this program. San Francisco is dealing with the same challenges as most other communities. The most common include participants who don't understand how to use program or who have sorting questions, the "ick" factor, participants who think they already compost everything they can in their backyards, people who think the program is inconvenient. Most of these issues are dealt with over the phone. Storage of carts has been an issue for some people, but the hauler works with residents to find a storage solution.

Additional Comments

Jack Macy was helpful and provided good info on his program. He also was helpful in providing ideas for King County to increase their participation. Overall response to San Francisco's program has been positive. Residents like this set up better then the old program. Jack emphasized the need to use a variety of outreach methods and use them consistently.

For more information

The Fantastic 3 are coming - brochure
Recycling is as easy as 1, 2, 3… - brochure
Get the power of the Fantastic 3 - postcard
Notes from phone conversation with Jack Macy, April 25, 2001
Collecting Organic Wastes – Case Studies report for King County, WA, June 7, 2001
Also see the following articles:
Resource Recycling, March 2001, get article title
Biocycle, February 2000, "San Francisco takes residential organics collection full-scale"
See other websites
www.sunsetscavenger.com
www.sfgov.org
www.ci.sf.ca.us
www.sfrecycles.org
Sending survey results and brochure sample.

Alameda County Waste Management Authority (ACWMA), CA
Contact: Robin Plutchok (female), Program Manager
(510) 614-1699 rplutchok@stopwste.org
www.stopwaste.org
(sent email list of links for other jurisdictions – I will forward).

Program Overview
Alameda County Waste Management Authority (ACWMA) is the primary funder of food scrap recycling programs in Alameda County (Castro Valley, Pleasanton, Alameda, San Leandro, Fremont, Oakland, Berkeley, etc.). Robin is not in the trenches running these programs, but she has a broad perspective in that she works with local cities and helps them with outreach efforts.

Outreach Methods Used
From her perspective, the most successful educational materials are those that are clear and simple, both in visual appearance and content. Humor works in the right situation, but a straightforward, classy approach often works better for this subject matter. It is her opinion that the benefits of participating are often forgotten in literature and one of the more difficult things to communicate. Yet, getting participants to understand and embrace the benefits can go a long way in increasing participation, both short and long-term.

The biggest mistake most communities make in outreach, in her opinion, is not doing enough of it. She encourages new communities implementing food scrap programs to do as much outreach as they can prior to a launch date and during start-up. She suggests doing more outreach earlier and doing it more frequently once the program starts. She is working on leveraging media for several communities in Alameda County. She recommends trying to have some type of contact with participants on a monthly basis, issuing press releases regularly and sending quarterly newsletters. She said she would print more materials during each print run.

Participant Challenges/Program Issues
Major challenges she sees are keeping participation numbers up after the initial start and perception issues – the "ick" factor and "one more thing to do".

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Data Collection/Program Monitoring
For communities in their jurisdiction, ACWMA requests quarterly monitoring. This involves random sampling on a collection day. Lids are lifted on carts that are out and checked (visual only) for kitchen scraps. For specific data collection info please refer to a specific city in their jurisdiction. They are arriving at participation rates using this technique.

In the communities she works with, they do not do any kind of promotion performance testing and do not have plans to in the future – though she thought it sounded like a good idea. For the most part, outreach efforts are loosely laid out and they are making changes as they go along and watching what other communities are doing

Additional Comments
Robin's partner is Brian Mathews who gave the Alameda County presentation at the Food Diversion Summit. Helpful and friendly, emailed good list of links ranging from local city websites to sites in Canada, New Zealand and for the Composting Council. Leveraging media could also work for the King County programs since they are neighboring communities similar to the ones in Alameda County.

Castro Valley Sanitation District, Castro Valley, CA (FULL SCALE AS OF 4/02)
"Food Scrap Recycling Program"
Contact: Noelle Hartshorn, Environmental Education/Recycling Program Coordinator
(510) 537-0987 - cvsd@aol.com
www.stopwaste.org

Program Overview
Castro Valley Sanitation District (CVSD) is an unincorporated 30-mile section of Alameda County in California (pop. 47,000). A pilot project started in November 2001 with 1,000 households in two neighborhoods (one made up primarily of younger residents, the other mostly seniors). Residents were already using "green" carts for yard trimmings. Ten-liter pails and liners (initial delivery only) were delivered for soiled paper products and food scraps. The program went full-scale to 16,000 households in April 2002. Liners are not supplied, but can be purchased. Alternative ideas are also provided in printed literature.

The program is called the "Food Scrap Recycling Program." The term "scrap" was strongly encouraged by the Alameda County Waste Management Authority (ACWMA), the primary funder of the program. They wanted to move away from the word "waste." According to staff, the name is acceptable to participants. It is being used by the majority of communities in the ACWMA territory.

The program is voluntary. Incentives to participate include reducing can size and realizing cost savings and doing something good for the environment.

Outreach Methods Used
Prior to program start, a press release was issued announcing the program. Articles followed in the two local newspapers. Pails with Yes/No labels were then delivered alongwith a full color, single fold brochure (approx. 6"x6") inside.

The self-mailer-style postcard with attached magnet was mailed several weeks after the pails were delivered. It included a yes/no column and a magnet (with perforations for tearing it away from the rest of the postcard). The full-color magnet gives contact info and encourages participants to recycle all food scraps. It also includes a reminder that plastic and glass are not acceptable. In addition, CVSD offers a hotline they call the "Rotline." A cart hangtag is also available for drivers to leave behind in case of a problem with materials or collection. A district newsletter, called "Pipeline" includes articles on the program and is mailed quarterly. Beyond those printed materials, staff participates in select community events (Fall Festival, etc.).

Several months after the program started, a focus group was conducted (2/02) using two groups of ten each (participants and non-participants). Awareness of the program was high among both groups. Participants seem to make the program work for them and come up with their own solutions as problems arise. Non-participants were more inclined to give up on the program once a problem arose. Biggest competition for material is the garbage disposal. Neither group could clearly articulate reasons for participating in the program. This lack of understanding of the benefits could be a contributing factor to lower participation. The lack of consistent green waste in the cart was a deterrent for some participants. Both groups also expressed concern about odors in the summer months. Participants were shown printed materials and most remembered having seen it. Material recall/retention and the program's high awareness suggest that the printed materials were effective. Last, being able to add soiled papers to the carts was considered an attractive feature.

About six months into the full-scale program another press release was issued around Halloween encouraging people to add their pumpkins to the "green" cart. Articles in the local papers followed. Currently, staff tries to issue press releases with information about the program on an every other week basis. Outreach materials were not designed to target a specific individual in a household. CVSD staff also felt providing the basic acceptance requirements was sufficient.

If they were to do it again, staff said they would do more extensive outreach pre-start-up (more media, intro letter, etc.). When they reprint the brochure, they will consider upgrading the look and content using classier graphics and simpler text, etc. They plan to continue issuing press releases as a way to keep the program in the local media. A "recycled art" (photos of recycled art by area students) calendar is given free to every resident. Weekly ads also appear in local newspapers with tips and reminders. Other ideas have included a "Cash for Trash" giveaway. A randomly selected participant could receive a small cash bonus if their cart is set-out and contains kitchen scraps or soiled papers. Overall, the materials seem to be working. Feedback is generally positive and participants seem to understand the basics of the program.

Staff is currently producing a program for use in local elementary schools and working on production of another issue of their quarterly newsletter "Pipeline."

Data Collection/Program Monitoring
Visual surveys on route collection days are done quarterly. Currently, staff surveys a route and lift lids on set-out carts on collection day. Without disturbing the contents, they look inside. If they can see any kitchen scraps it is counted in the set out rate. Carts may have kitchen scraps that can't be seen below yard waste and are consequently not counted. As a result, staff feels actual participation may be higher. The pilot program had a 40% participation rate (organics in "green" cart) averaging 12lbs./household/week. Participation in the full-scale program is 25% (average 8lbs./household/week). Some participants have commented that the program is "more trouble than it's worth" which may be one reason for the decline in participation. Also, in general, staff said yard waste numbers were down county-wide, though that seems to be the result of the changing season.

CVSD staff tracked participation and diversion rates only during the pilot. Education and promotion materials were not performance tested in the pilot nor do they have plans to test in the permanent program. A question about education material recall and retention was asked during the focus group. Results were positive so materials have been deemed effective.

Participant Challenges/Program Issues
The most frequently asked questions centered on whether participants were using the program correctly ("Am I doing it right?"). Staff feels they walk a fine line with printed material content. They want to be specific on what is/is not accepted in program, but find that some people take the lists too literally. In the future, they would pay special attention to the Yes/No list and aim for clearer, easy-to-understand graphics. The "ick" factor also comes up. Staff responds by supplying liners as encouragement, suggesting liner alternatives and suggesting a gradual approach (first recycling soiled paper, then moving on to the wetter materials as participants feel comfortable).

Additional Comments
This is the first full-scale residential program in Alameda County. Most other communities in Alameda County are in various stages of implementing full-scale programs. They will likely be set-up using the same name and set-up. Other parting comments by staff included the tip that timely distribution of pails is important. The recommend getting the pails out while articles are appearing in local papers. About nine months into the program, staff is experiencing a number of calls that pail lids are breaking off and that is a concern for them. Overall, staff was helpful and enthusiastic about the program.

Also, during the focus group, participants were also shown samples of the San Francisco's materials and preferred the more comprehensive materials and clearer graphics.

For more information
Presentations of Focus Group Findings on Castro Valley Food Scrap Recycling Pilot Program, March 1, 2002
"Food Scrap Recycling Comes to Castro Valley" - brochure
"If your food scrap recycling pail could talk…" - cart hang tag
"Food Scrap Recycling" – postcard/magnet (all in one)
"Food Waste Recycling" - cart label (Waste Management)

"Food Scrap Pail" – pail label
"Pumpkins, Pumpkins, Pumpkins" – 10/30/02 press release
Also see the following articles:
Biocycle, December 2002, "Incentives Stimulate Residential, Commercial Organics Diversion"
Also see www.jgpress.com for archived articles.

Pleasanton, CA (Pilot 9/02-3/03, Full Scale planned 4/03)
"Food Scrap Recycling Program"
Contact: Debbie Jeffery, Recycling Program Coordinator
(925) 846-2042 - debbie@pleasantongarbageservice.com
www.ci.pleasanton.ca.us

Program Overview
Pleasanton Garbage Service is the hauler for the City of Pleasanton. Pleasanton is a newer community (pop. 63,000) in Alameda County consisting largely of seniors. A six-month long pilot in one neighborhood was initiated in September 2002 serving 900 households. Participants use "green" carts and 2-gallon pails. Collection was switched from every other week to weekly when the pilot started.

The program is called the "Food Scrap Recycling Program." The term "scrap" was strongly encouraged by the Alameda County Waste Management Authority (ACWMA), the primary funder of the program. They wanted to move away from the word "waste." According to staff, the name is acceptable to participants. It is being used by the majority of communities in the ACWMA territory.

The program is voluntary. Incentives to participate include reducing can size and realizing cost savings and doing something good for the environment.

Outreach Methods Used
One month prior to the start of the pilot an introductory letter from the hauler was mailed to participants. A postcard from the city was also sent about this time. Three weeks prior to start date, a public information meeting was held at a local library. There was low turnout at the meeting. It was determined that the meeting was held too early in the evening.

Pails were delivered two weeks prior to start date. A yes/no label was attached to the lid and a program brochure was enclosed inside. No new labels were put on the "green" carts. Collection trucks were also outfitted with signs that promoted the program.

The style and look of the brochure and postcard are classy and straightforward. Pleasanton chose this style partly based on a higher-educated, upper income population. For the most part, residents were pleased with the look and content of the materials. Staff felt the materials were well-received.

In the full-scale program, the postcard will stay the same, but the brochure will be updated using fewer words and more graphics. They will utilize paid advertising in the full-scale program and have booths or some sort of presence at community events such as farmer's markets, fairs, etc.

Outreach materials were not designed to target a specific individual in a household. Staff also felt providing the basic acceptance requirements was sufficient.

Data Collection/Program Monitoring
Participation rates are around 30% in this program, based on cart set-outs. A lid-lifting survey was done in January 2003. While there were less carts set-out (presumably because of less yard waste being generated), the amount of food scraps was still the same. Two route surveys were conducted. The September 2002 survey showed out of 655 accounts observed, 459 carts were set out and 33% included food waste. In January 2003, out of 500 accounts surveyed, 300 carts were set out and 34.1% included food scraps. No additional surveys are planned at this time. Further, no focus groups have been conducted, nor are any planned at this point. No performance testing of promotional materials have been done, nor are any planned for the future.

Participant Challenges/Program Issues
Some residents are still confused about what is/is not acceptable. Others are still "getting use to the idea." Some are still figuring out the best spot for their pail. Pleasanton has told these folks that the pail is not a requirement and that they can use a different method of collection (milk container, etc.). Other issues that have been mentioned include smell and rodents, although neither is a serious problem.

Additional Comments
Pleasanton plans to do more outreach on a broader scale in the full-scale program. They are following Castro Valley's lead in both data collection and promotion strategy, each of which can be traced back to ACWMA and their requirements. The full-scale program is scheduled to start in April 2003 and will serve 18,000 households.

For more information
See their website (address above) for samples of the postcard and brochure.

San Leandro, CA (Full Scale 12/02)
"Food Scrap Recycling Program"
Contacts: Jennifer Auletta, Solid Waste & Recycling Specialist
(510) 577-6026 - jauletta@ci.san-leandro.ca.us
Judy Erlandson, Solid Waste & Recycling Specialist
(510) 577-6026 - jerlandson@ci.san-leandro.ca.us
www.ci.san-leandro.ca.us

Program Overview
San Leandro (pop. 25,000) launched a full-scale program December 2002 serving 13,000 households. No pilot was done in this community. Participants were provided "green" carts and

2-gallon pails. Liners are not a permanent part of the program, but residents can request them from the city. Collection of yard waste, food scraps and soiled papers is weekly.

The program is called the "Food Scrap Recycling Program." The term "scrap" was strongly encouraged by the Alameda County Waste Management Authority (ACWMA), the primary funder of the program. They wanted to move away from the word "waste." According to staff, the name is acceptable to participants. It is being used by the majority of communities in the ACWMA territory.

The program is voluntary. Incentives to participate include reducing can size and realizing cost savings and doing something good for the environment.

Outreach Methods Used
A postcard titled "Food Scrap Recycling is coming to San Leandro" was mailed to residents about two weeks prior to program start. Pails (with Yes/No label on lids) were then delivered with a program brochure located inside. The style and tone of the brochure and postcard is factual and classy. Staff chose photos of food that presented the food in a positive way. No new labels were placed on the "green" carts. No paid advertising was planned at the start due to the fact that over 40% of the readership of the local paper are in an area not serviced by this program. Despite the lack of a promotion plan, the kick-off went smoothly according to staff. Most calls and comments are positive about the program. If they were doing it over, they would start promotions earlier and take a more broad-based approach.

Currently the city is in discussion with a consultant to develop a long-term promotion strategy. Strategies they are considering in the future include updating and expanding their website, paid advertising, issuing regular press releases, bill inserts, quarterly newsletters, posters, signage (truck, bus shelter, etc.) and a compost giveaway.

The brochure and postcard both are full-color pieces with photos of the pail, food and "green" cart. They are simple, but classy, not overly worded and have plenty of graphics. Outreach materials were not designed to target a specific individual in a household. Staff also felt providing the basic acceptance requirements has been sufficient.

Data Collection/Program Monitoring
No data available yet. See comments under Castro Valley and Pleasanton on planned collection and monitoring strategies. No performance testing of promotional materials have been done, nor are any planned for the future.

Participant Challenges/Program Issues
Most calls fielded are about clarifying what can/can't go in the "green" cart. Some residents do not want to use the pail, but then wonder if they can participate. Pail use is optional and alternatives are suggested. No other major challenges or issues have surfaced to date.

Additional Comments
San Leandro's program follows closely those operating in Castro Valley and Pleasanton. As a result, many San Leandro residents were already familiar with the food scrap programs in these

other two neighboring communities. This is part of the reason staff did not put a broader or more-detailed promotion program in place at the start. In general, San Leandro plans to do more outreach on a broader scale in the future. They are following Castro Valley's lead in both data collection and promotion strategy, each of which can be traced back to ACWMA and their requirements.

For more information
Food Scrap Recycling is coming to San Leandro – postcard
City of San Leandro – Food Scrap Recycling - brochure
See website (address above) in future for more info.

Alameda, CA (Pilot 10/02, Full-scale 2/03)
"Organics Curbside Collection Program" (brochure) "Food Scrap Recycling" (postcard)
"Green Recycling Program" (website)
Contact: Maria DiMeglio, title?
(510) 749-5893 – email?
www.ci.alameda.ca.us

Alameda County Industries (ACI) - Hauler for City of Alameda
Contacts: Catherine Brewer, Public Education Specialist
(510) 750-0223 (cell) - cc_brewer@yahoo.com
Nicole Rinauro, title?
(510) 760-0813 - nrinauro@msn.com

Program Overview
The city of Alameda launched a pilot food scrap collection in October 2002 in three areas. Participants were provided "green" carts and a 2 gallon pail with handle and lid. Collection is weekly for yard waste, food scraps and soiled papers. A full-scale program is being planned for February 2003.

Outreach Methods Used
An introductory letter was sent to participants. The brochure was enclosed with the pail at delivery. Check about postcard? Pails had a label attached that included a list of acceptable and non-acceptable materials. The style and tone of the pieces is classy, factual. They are full color pieces. The city also hosted a compost giveaway at a local Earth day event.

The name of the program is stated differently on each piece and their website. Why? Is this confusing to participants?

Data Collection/Program Monitoring
No contact made to discuss.

Participant Challenges/Program Issues
No contact made to discuss.

Additional Comments
I tried several times to reach Catherine Brewer's counterpart, Nicole Rinauro at ACI and Maria DiMeglio from the City of Alameda. The City of Alameda is going full-scale in February 2003, so that is probably why I am having difficulty connecting with them. I have forwarded Nicole a list of written questions and offered both a conversation by phone or via email.

For more information
City of Alameda website (www.ci.alameda.ca.us/news) has samples of brochure, postcard and program details.
Biocycle, December 2002, "Incentives stimulate residential, commercial organics diversion"
See also www.jgpress.com for archived articles.

San Jose, CA (Full scale planned Fall 2003)
"Recycle Plus" (tent.)
Michele Young, title?
(408) 277-3780 - michele.young@ci.sj.ca.us
www.ci.san-jose.ca.us

Overview
San Jose (pop. 1 million) is not planning a pilot until fall 2003 (at the earliest). A contract for the pilot was awarded in July 2002. No education or promotional materials have been developed yet. San Jose is considering calling their pilot "Recycle Plus," but it is not definite yet. Most likely they will provide a "green" cart and pail for yard waste, food scraps and soiled papers. Collection will be weekly. They are anticipating a lower participation rate (under 25%). One concern is that most residents are already at a 32-gallon can size for garbage. There is only one service level below this (20-gallon can), so financial incentives are limited. In addition, residents have to sign up for service and pay $1/month for the cart.

The program will be voluntary. Incentives to participate include reducing can size and doing something good for the environment.

For more information
Collecting Organic Wastes – Case Studies report for King County, WA, June 7, 2001
See these websites for more information
www.recycleplus.org
www.greenteam.com
www.sunsetscavenger.com (Norcal Waste Systems info; San Jose hauler)

Canadian Programs
Note: Canadian programs are mandatory. Compostables are commonly banned from landfills.

Toronto, Ontario (Full-scale phasing in fall '02 – summer'03)
"Green Bin Program"
Contacts: Renee Dello, Coordinator of Waste Diversion

Meucci Consulting, 445 16th St., Bellingham, WA 98225

(416) 392-5806 - rdello@toronto.ca
Heidi Croot, Support Communications Coordinator
(416) 397-0281 - hcroot@toronto.ca
www.toronto.ca/services

Program Overview
Toronto (pop. 4.5 million) is phasing in their residential organics program. Currently, they have 70,000 residents in the program. They anticipate having 120,000 in the program by summer 2003. Participants are given a "green" cart and 2-gallon pail for soiled papers and food scraps (yard waste is collected separately). Collection of the "green" cart is weekly. The name of the program is "Green Bin Program." The name seems to work fine for residents.

Outreach Methods Used
Toronto hired students, trained them and had them go door-to-door handing out information. If no one was home, they left doorhangers that included information about the program. Community meetings were also held. Carts and pails were delivered with an information card and collection calendar. A newsletter is sent quarterly and the city participates in community events. They make the compost available for sale to residents. One thing they would do differently is improve the timing of media attention and pail delivery so they coincide better. Samples of the information card and newsletters can be seen on their website.

The style and look of the info card and newsletters is simple and straightforward. Materials are printed two color (green/black) on white matte stock. Outreach materials were not designed to target a specific individual in a household. Staff also felt providing the basic acceptance requirements has been sufficient.

Data Collection/Program Monitoring
Participation rates are around 90% and the quality of the compost is good. Diversion reports are being sent in the mail. No performance testing of promotional materials have been done, nor are any planned for the future.

Participant Challenges/Program Issues
No major program challenges or issues have been faced at this time. Common questions are typical of those experienced by other communities. Questions about proper sorting and vector control are most common. Staff relies primarily on phone conversations to provide suggestions to participants.

Additional Comments
This program accepts plastic bags (unusual). The bags are sorted out at the compost facility and treated as garbage, but residents can use them to line their pails. Renee Dello provided most of the information about this program. She is not as familiar with the outreach details of the program, but is a good contact at this point. Tammy Robinson handled education and promotion for the program, but has just left (1/03) for a one-year maternity leave. Her replacement is Heidi Croot, who is new to the organization.

For more information

Meucci Consulting, 445 16th St., Bellingham, WA 98225

Green Bin newsletter, July 2002 (view on website)
Green Bin newsletter, October 2002 (view on website)
Information card (view on website)
Green Bin – Thanks Etobicoke! (PDF)
Bus Board (PDF)
Newspaper Ad (PDF)
Magazine Ad (PDF)
Open House Flyer (PDF)
Late Delivery Flyer (PDF)
Two sample ads (PDF)
Banner (PDF)
Student Intern Script (Word document)
Student Intern Q&A (Word document)

Ottawa, Ontario (Pilot until 5/04)
"Compost Plus"
Contact: Rob Sinclair, Project Coordinator
(613) 580-2424 ext. 22643 - robert.sinclair@ottawa.ca
http://ottawa.ca/city_services/garbage

Program Overview
The city of Ottawa is currently in the middle of a large-scale, long-term pilot involving 5300 households in four city wards and nine route areas. The pilot began in October 2001 and will run until May of 2004. A variety of carts, pails and bags were initially used, though they have moved to a standard 120 liter size cart and seven liter pail with lid and handle. Collection is weekly and materials accepted include yard wastes, food scraps and soiled papers.

The name of Ottawa's program is "Compost Plus." The tag they use is "Make it second nature." No major problems with the name were mentioned.

Outreach Methods Used
About a month prior to the program start, an invitation and introductory letter were hand-delivered to participants. Four open houses were then held at local community centers and included a slide show and giveaways. Attendance was low. No specific reason was given for why the turnout was low.

Pails were then delivered with user guides enclosed and collection calendars. The user guide is also available on Ottawa's website alongwith a checklist with common problems and solutions. The tone and style of the user guide is straightforward and simple. A hotline direct email is available for participants to use for questions. No paid advertising is in place at this time. A newsletter is the primary form of communication at this time. Two have been produced and mailed since the pilot began. The first was in winter 2002 and the second in summer 2002. They are produced on average every six months. Compost giveaways have also been scheduled. Email collection reminders are sent and surveys are conducted periodically. Two surveys have been conducted to date, one in March 2002 and another in September 2002. Any changes in the

program generate the production and mailing of a flyer. A leave behind is available to drivers to use when problems with materials and collection occur. Materials are printed two color on matte stock. Outreach materials were not designed to target a specific individual in a household. Staff also felt providing the basic acceptance requirements has been sufficient.

Student interns are used to track routes and look for problems. A flyer and complimentary liner are provided to households experiencing problems. Liners are also available for sale at local retail outlets.

In a full-scale program, Ottawa staff would work to have more frequent contact with participants. They would consider paid advertising, more giveaways and producing newsletters quarterly. Meetings with editorial staff of local papers would also be arranged.

Data Collection/Program Monitoring
Drivers are provided counters and those numbers are used to determine set-out rates. Current average participation is 48%, with a low of 28% and a high of 63%. Ottawa has a combined diversion rate of 50% for yard waste, soiled papers and food scraps. Organics diversion measured in the first 14 weeks of the program was 30%. No performance testing of promotional materials have been done, nor are any planned for the future. Satisfaction levels are measured when surveys are conducted.

Participant Challenges/Program Issues
Program challenges have been typical of other programs. The top three issues staff deal with are concerns over rodents, insects and odors. Solutions are suggested for dealing with each of these. In addition, complimentary liners are made available to households experiencing repeated problems. No other major program challenges or issues were reported at this time.

Additional Comments
Rob Sinclair is an excellent contact and one of the first Canadian contacts I would call again. Knowledgeable, friendly and a supplier of quality, detailed information and referrals. Sending copies of newsletters and surveys.

For more information
Compost Plus Survey, Draft Summary of Findings, 3/13/02
Compost Plus Survey, Draft Summary of Findings, 9/4/02
Resource Recycling, August 2002, "Comparing containers, carts, bags and pails"

Halifax, Nova Scotia (Full-scale since 1998)
"Organics Green Cart"
Contact: Laurie Lewis, Coordinator of Collections & Processing
(902) 490-7172 - lewisr@region.halifax.ns.ca
www.region.halifax.ns.ca/wrms

Program Overview

Halifax (pop. 366,000) has offered a residential food scrap program since 1998. To date, 110,000 residents have been provided a "green" cart and "kitchen countertop bin" with lid and handle to recycle food scraps, soiled papers and yard waste on an every other week basis. The name for their program is the "Organics Green Cart." The tags they use include "Let's Waste Less" and "Our success. It's in the bag." The name seems to work for residents, although many refer to the program as the "Green Cart" program.

Outreach Methods Used

Halifax developed an introductory letter that was mailed to all participants prior to the program start. Carts and bins were hand-delivered. Both the cart and bin had labels listing acceptable and non-acceptable materials. A brochure titled "Welcome to the program" was developed and printed in English, French and Braille. It was enclosed in the kitchen bin at delivery. At the program start, staff met with editorial boards of local newspapers, issued a press release and developed ads for local radio, TV and print. Information was added to the city's website and a school program was produced. A kick-off was held with a media photo opportunity to take pictures of the warehoused carts and bins. Delivery then began the next day, same day as pictures of all the bins appeared in local papers. A newsletter is sent about 3-4 times per year.

In addition, Halifax participates in community events, such as garden shows and farmer's markets. They also held a compost sale in the Summer 2002 for the community. They staff a hotline with a student intern to provide technical assistance.

The style and tone of the materials was straightforward and simple. Outreach materials were not designed to target a specific individual in a household. Staff also felt providing the basic acceptance requirements has been sufficient.

According to Laurie Lewis, the key to success for their program has been political support and good prep work prior to start-up. A poll conducted in November 2001 showed 81% were satisfied with the program. Most said they wanted more information about the program, not less. If they were doing it again, one change they would make would be to develop one brochure that talked about the entire collection system – not just the "green cart."

Data Collection/Program Monitoring

Currently, Halifax has an 85% participation rate. Participation is about the same as when they first started. Halifax has no significant plans to try to increase participation at this time, just maintain it. In April 2001, a survey was conducted. Staff went out ahead of collection trucks on one route and counted the number of set outs, lifted lids and looked for food scraps and soiled papers and any problems. If there was a problem, they followed up with a visit to talk with the resident or left a flyer behind.

In addition, quarterly phone surveys are done with about 500 residents. They are asked how the program is working and whether they need any questions answered. Most situations are handled over the phone, although a personal visit can be scheduled if needed.

Diversion rate is 56%. Halifax has also held focus groups. Results area being forwarded. No performance testing of promotional materials has been done, nor are any planned for the future.

Participant Challenges/Program Issues
Current issues they face are improving compost quality, promoting proper sorting and trying to reduce the amount of recyclable paper being composted. In the future, they plan to promote waste reduction strategies more, reduce the garbage bag limit, place a higher fee on extra garbage bags set out and conduct a waste characterization study.

Additional Comments
Laurie Lewis is a good contact and provided useful information. Sending detailed info including focus group reports, survey results and promotional material samples.

For more information
Household Guide to Waste Management (see website for PDF version)
See these other websites:
www.gov.ns.ca/enla
www.halifax.ca/wrms

Prince Edward Island, CANADA (full-scale since 2002)
"Waste Watch"
Contact: Heather Chowen, Disposal Manager
(902) 894-0330 - hchowen@iwmc.pe.ca
www.iwmc.pe.ca

Program Overview
Prince Edward Island has recently finished implementing an island-wide food scrap program serving 55,000 households (November 2002). Collection is offered every other week for yard waste, food scraps and soiled papers. The program was phased in over five months. Carts with kitchen mini bins were delivered to each household.

Outreach Methods Used
Prior to cart/bin delivery, a press release was issued and a media photo opportunity was scheduled. Articles and photos appeared in the two local papers. Radio interviews were also scheduled.

Information packets, which included a welcome letter from the CEO of IWMC, a general program brochure and sorting guide were inside the carts along with the bins at the time of delivery. No liners are provided with this program. Collection maps were printed in local papers so customers could look up their collection day. A hotline was established and the corporation's website was updated with current information. A newspaper titled "Waste Watch Times" was printed and mailed to every household in May 2002 (one-time occurrence). Paid advertisements were scheduled for local newspapers, radio and TV. A weekly column appears in the local paper and gives tips and suggestions. The corporation participates in several community events, including having a float in the annual parade and booths at various island conferences.

Outreach materials were not designed to target a specific individual in a household. Staff also felt providing the basic acceptance requirements has been sufficient. The tone and style of the printed pieces is straightforward and simple. There is a considerable amount of text and few graphics. They do however, use "cartoony" people they refer to as "cart people."

No major changes are planned for outreach in the near future. Currently, they plan to continue with paid advertising and the weekly columns in the local papers. Their focus is identifying any contaminants and working to keep compost quality high. They would make no major changes in the way they launched the program. Staff did emphasize that the pre-planning work they did and the fact the program had been operating in another part of island for several years helped make for a smooth launch.

Data Collection/Program Monitoring

No formal data collection or program monitoring systems are in place at this time. Staff feels based on driver observations (no hard numbers) that participation rates are high (likely 85% or better). The quality of material is better than when the program first started as a pilot. They attribute this to the fact more people knew about the program ahead of time and were better prepared. No performance testing of promotional materials has been done, although they are considering that for the future. A general survey is planned for this spring. It will measure customer satisfaction and ask about preferred collection frequency and any problems people are experiencing. It has not been determined if this will be a phone or mail survey.

Diversion rates are provided by the compost and recycling facilities. The diversion rate for all recyclables is 65%. Organics make of 33% of that as provided by the compost facility. PEI uses an enclosed roll-off style container to produce its compost. These are static containers hooked up to aeration units.

Participant Challenges/Program Issues

There are no significant participant challenges or issues with this program. Phone calls received via the hotline are usually about sorting issues and vector control. PEI does offer the Waste Watch program to multi-family dwellings. This segment of the population, and public waste areas, is where most contamination and problems occur. Apartment managers typically provide one cart set per two units and address them so contamination or other collection or processing issues can be tracked back to a specific unit. Each apartment is charged for the cart set so some ownership and responsibility is attached. This seems to help somewhat in keeping contamination down.

Additional Comments

Sending info packet, copy of Waste Watch Times, paid advertisements, etc.

For More Information

www.gov.pe.ca

APPENDIX C

Residential
Food Scrap Collection & Recycling

Select Contact List – U.S. & Canada

January 2003

Meucci Consulting, 445 16th St, Bellingham, WA 98225

RESIDENTIAL FOOD SCRAP RECYCLING & COLLECTION
SELECT CONTACT LIST – U.S. & CANADA

NAME/TITLE	ORGANIZATION	PHONE/FAX	E-MAIL/WEBSITE	ADDRESS	NOTES
Jack Macy City Administrator	City of San Francisco	(415) 355-3751 (415) 554-6393	jack.macy@sf.gov.org www.sfenvironment.com	???	Talked 1/13/03 Sending surveys, brochure sample; email KC focus group reports, outreach materials
Bob Besso Recycling Manager	Sunset Scavenger (SF hauler)	(415) 330-2960 ???	??? www.sunsetscavenger.com	???	Jack Macy referral
Nancy Plunkett Waste Reduction Manager	Chittenden SWD	(802) 872-8100 Ext. 222 (802)878-5787	nplunkett@cswd.net www.cswd.net	1021 Redmond Rd. Williston, VT 05495	Talked 1/8/03 Info packet rec'd; update when KC goes full-scale
Michele Young ???	City of San Jose	(408) 277-3780 (408)277-3669	Michele.Young@ci.sj.ca.us www.ci.san-jose.ca.us.esd	???	Called 1/7/03, out until 1/8/03. Talked 1/8/03. Email post 8/02 KC info
John Nicoletti	Norcal Waste Systems (San Jose	(408) 576-0057			Michele Young contact. No contact

	hauler)				made.
Renee Dello Coordinator of Waste Diversion	City of Toronto, Ontario, CANADA	(416) 392-5806 (416) 392-4754	rdello@toronto.ca www.toronto.ca/services or www.city.toronto.on.ca/greenbin	Works & Emergency Dept. Solid Waste Management Services City of Toronto 100 Queen St. W 25th Fl. East Tower Toronto, Ontario CANADA M5H2N2	Michele Young referral. Referred me to Heidi Croot.
Heidi Croot Senior Communications Coordinator	City of Toronto, Ontario, CANADA	(416) 397-0281 (416) 392-4540	hcroot@toronto.ca www.toronto.ca/services or www.city.toronto.on.ca/greenbin	Works & Emergency Services Support Services City Hall 100 Queen St W 24th Fl West Tower Toronto, Ontario CANADA	Heidi Croot replaces Tammy Robinson (on maternity leave). New to position.

				M5H2N2	
Noelle Hartshorn Env. Ed./Recycling Program Coordinator	Castro Valley Sanitary District	(510) 537-0987 (510) 537-1312	cvsdgreen@aol.com www.stopwaste.org	21040 Marshall St. Castro Valley, CA 94546	Talked 1/8/03. Alameda, Pleasanton, San Leandro referrals.
Jennifer Auletta Solid Waste & Recycling Specialist	City of San Leandro	(510) 577-6026 (510) 577-6019	jauletta@ci.san-leandro.ca.us www.ci.san-leandro.ca.us	835 E. 14th St San Leandro, CA 94577	
Judy Erlandson (Part-time) Solid Waste & Recycling Specialist	City of San Leandro	(510) 577-6026 (510) 577-6026	jerlandson@ci.san-leandro.ca.us www.ci.san-leandro.ca.us	835 14th St San Leandro, CA 94577	Referral from Noelle Hartshorn and Robin Plutchok. Spoke 1/03. Sending brochure and postcard, etc.
Debbie Jeffery Recycling Program Coordinator	Pleasanton Garbage Service	(925) 846-2042 (925) 846-9323	debbie@pleasantongarbageservice.com www.pleasantongarbageservice.com	PO Box 399 Pleasanton, CA 94566	Referral from Noelle Hartshorn, Robin Plutchok. Spoke 1/03. See website for outreach samples.
Nelson Fialho Deputy City Manager	City of Pleasanton	(925) 931-5006 (925) 931-5482	Nelson.fialho@ci.pleasanton.ca.us www.ci.pleasanton.ca.us	123 Main St. PO Box 520 Pleasanton, CA 94566	Referral from Debbie Jeffery. No contact made.

Robin Plutchok Program Manager	Alameda County Waste Management Authority (ACWMA)	(510) 614-1699 (510) 614-1698	rplutchok@stopwaste.org www.stopwaste.org	777 Davis St Ste 100 San Leandro, CA 94577	Talked 1/03. Good referrals.
Catherine Brewer Public Education Specialist	Alameda County Industries (ACI)	(510) 750-0223 (cell) (510) 357-7329	cc_brewer@yahoo.com www.ci.alameda.ca.us	2307 Blanding Ave. Ste B. Alameda, CA 94501	Talked 1/03. Partners with Nicole Rinauro.
Nicole Rinauro ?	Alameda County Industries (ACI)	(510) 760-0813 (510) 357-7329	Nrinauro@msn.com www.ci.alameda.ca.us	2307 Blanding Ave. Ste B. Alameda, CA 94501	
Maria DiMeglio ?	City of Alameda, Public Works	(510) 749-5893 (510) 749-5867	Mdimegli@ci.alameda.ca.us www.ci.alameda.ca.us	???	Left message 1/13/03.
Rob Sinclair Project Coordinator	Ottawa Solid Waste Services	(613) 580-2424 ext. 22643 (613) 523-7914	robert.sinclair@ottawa.ca www.ottawa.ca/gc/services	2799 Swansea Cres. Ottawa, Ontario CANADA KIG5X5	Talked 1/21/03. Good Eastern Canada referrals – Halifax, PEI, AMRC, Niagara, Durham, Markham

Laurie Lewis Coordinator of Collection & Processing	Halifax Regional Municipality Solid Waste Division	(902) 490-7172 (902) 490-6690	Lewisr@region.halifax.ns.ca www.region.halifax.ns.ca/wrms	PO Box 1749 Halifax, Nova Scotia, CANADA B3J3A5	Talked 1/23. Good contact
Brian Smith General Manager	Halifax Regional Municipality Solid Waste Division	(902) 490-? (902) 490-6690	Smithb@region.halifax.ns.ca www.region.halifax.ns.ca/wrms	PO Box 1749 Halifax, Nova Scotia, CANADA B3J3A5	No contact made. Laurie Lewis's boss.
Jim Bauld Division Planning Coordinator	Halifax Regional Municipality Solid Waste Division	(902) 490-7176 (902) 490-6690	Bauldj@region.halifax.ns.ca www.region.halifax.ns.ca/wrms	PO Box 1749 Halifax, Nova Scotia, CANADA B3J3A5	No contact made. Co-worker of Laurie Lewis.
Heather Chowen Disposal Manager	Island Waste Management Corp.	(902) 894-0330 (902) 894-0331	Hchowen@iwmc.pe.ca www.iwmc.pe.ca	110 Watts Ave Charlottetown, PEI, CANADA C1E2CI	IWMC is government solid waste agency.
Claudette Gallant Manager	IWMC – Slemon Park office	(902) 436-8275 (902) ?	Cgallant@iwmc.pe.ca www.iwmc.pe.ca	15 Cedarwood Ave. PO Box 271 Slemon Park, PEI CANADA C0B2AO	Heather Chowen referral. No contact made.

Claudia Marsales ?	City of Markham	(905) 477-7000 ext. 3560 (905) ?	www.city.markham.on.ca	Markham, Ontario, CANADA	Rob Sinclair referral.
Barbara Frierson Title?	City of Fremont	(510) 494-4672 ?	? www.?	Fremont, California	Full scale Summer '03. No materals yet. Referral from Robin Plutchok. No contact made.
Lawrence Winter Resource Recovery Coordinator	City of Hutchinson	(320) 587-5151 (320) 234-4240	www.ci.hutchinson.mn.us	111 Hassan St SE Hutchinson, MN 55350	No contact made.

Updated 1/03.

Attachment J

CEDAR GROVE COMPOSTING FOODWASTE PILOT PROJECT

The project will be performed on a temporary basis starting in March 2002. The sources of foodwaste will be King County area. Material will be collected on a weekly and bi-weekly basis in King County and be commingled with yardwaste from those household participating.

King County will specify the collection routes. The Maple Valley Facility is anticipating that material from King County will be delivered in route trucks directly to the facility without going through transfer stations.

All material will be segregated within the tipping building or in covered Zone 7 from other yard waste. Since the projects will generate small quantities in relation to the capacity of the Maple Valley facility a large percentage of the composted mix will be yard waste, bulking agents and woodwaste in order to build a zone. Each subzone in Zone 7 as discussed later has a 500 ton green waste capacity and will be started on a weekly basis. Total foodwaste tonnage is not expected to be more than 20 tons per week from all sources. Currently the facility receives an average of 800 tons per week. The pilot project will be performed starting in March. The material will be delivered on a pre-scheduled day of the week allowing quick processing and zone construction. The amount of food waste in any one batch will vary from 2% to 20%.

EXPERIENCE WITH POST CONSUMER FOODWASTE

The Maple Valley Facility successfully completed a pilot test for the City of Seattle in 2000 and 1993 concerning post consumer food waste. The 1993 findings were published in BioCycle July and August of 1995. The study concluded that the negative aeration system and venting to biofilters that have continued to operate at the facility were successful in producing good quality compost with no environmental impacts. Various mix designs and bulking agents were identified and utilized. With the practical knowledge gained from this pilot and with recent additions to the facility including the tipping building and enclosed primary zone this facility could easily expand the feedstock to include food waste.

CURRENT PRE-CONSUMER FOODWASTE OPERATION

The current program receives over 10,000 tons annually of pre-consumer vegetative food waste.

Background:
The pre-consumer foodwaste has special operational requirements regarding a) how it is collected and transported; b) how it is shredded and blended; c) how odors will be managed during delivery, mixing and processing.

Collection and Transport:
Trucks entering the facility with food waste will be identified and logged on a foodwaste account frequency log to verify weekly collection. If the load cannot be verified to be in compliance with King County Board of Health Regulation 10.28.040 then the load shall be identified as

unacceptable and turned away from the facility per EMS figure 3.4, Receiving Decision Tree. This regulation requires that waste containers "be removed from the premises (of the waste generator, not composter) no less than once per week, unless a different frequency is approved by the health officer." Materials from the every-other-week pilot areas with aerated carts will be exempt from this requirement, per Health Department authorization.

Shredding and Blending

The foodwaste is generated at a relative uniform monthly rate. The percentage of foodwaste tonnage varies from approximately 10 % of the input in winter months to approximately 5 % in the summer months. This 5 % to 10 % volume will be processed on a priority basis.

There are two distinct waste streams received from pre-consumer recycling customer. The first consist of front loader trucks that collect from 1 and 8 cubic yard containers that are received in a combined "front loader" load. The second are 20 to 40 cubic yard containers that are received in individual "rolloff" boxes. The front loader loads are approximately 90% food and 10% cardboard. The rolloff loads are the opposite proportions: approximately 10% food and 90% cardboard. The front loader loads that contain free liquid will be tipped in the tipping building, then immediately blended with yard waste. This material will then be processed through the tub grinder. This is a new procedure to address the visible presence of round fruit and vegetables that pass through the hammermill disc screen without maceration. The tub grinder is a more aggressive grinder and is intended to macerate the round foodwaste to minimize its appearance on the outside of each primary batch pile. In the event the tub grinder is being serviced or a load is received late in the day a second-choice alternative will be immediately blended the front load foodwaste with yardwaste inside the tipping building. The rolloff loads will continue to be processed with the hammermill and will also be blended with yardwaste inside the tipping building if received late in the day. The rolloff loads will also be sorted with the front loader to separate any visible round fruit and vegetables, for processing through the tub grinder. Insuring proportioning in the feedstock preparation shall be by pre-blending at the tipping area with yard waste. This will be further proportioned metering of the two grinders and any bulking agent according to the EMS plan.

The mixing procedures for this material consist of several components. Once the primary sort (by front loader) has separated the bulkier fraction of cardboard boxes, bulking agent and /or yard waste will be mixed with the foodwaste prior to shredding. The proportions of the three components will be designed to provide controls in porosity, carbon, and moisture so that the shredding operation can simultaneously macerate the food feedstock and blend the other components. The EMS plan will provide the measurement tool to assess the need for adjustments in the proportioning and mixing step.

Enclosure

The tipping building is used to enclose and contain both the foodwaste and its free liquid. Floor drainage slopes to a sump area. The leachate is returned to the active composting piles or returned to the pond system for disposal via the force main connection. The tipping building has roof ventilation to collect exhaust and is directed to the tipping building biofilter.

Odor Control

Odors will be managed by a prevention strategy followed by a collection strategy during delivery, mixing, and processing. The prevention strategy involves insuring the feedstock meets Health Code requirements regarding its age, then immediately sorting and blending the feedstocks prior to shredding. Priority will be given to the shredding and placing of foodwaste within each primary batch quickly. The collection strategy involves moving as much of this activity into the tipping building. The tipping building has a collection system for air in the roof gable. This will add a second level of odor management.

Liquids will be managed by a collection system. Free liquids are captured within the building in a grated sump area. This liquid will be treated with sodium hypochlorite, ozone treatment system, or be added immediately for mixing with batches that heat to 150 degrees.

SPECIAL PROCESSING FOR POST CONSUMER FOOD WASTE

The King County Pilot Project will include the following material and specifically exclude other material as listed:

Material Accepted

Fruit & vegetable peelings and scraps
Meat & fish bones and scraps
Egg shells, cheese and dairy scraps
All food leftovers
Coffee grounds, filters and tea bags
Used paper towels, napkins and tissues
Food-soiled card board packaging (without plastic or aluminum coatings)

Material Not Accepted

Liquids (milk, broth,
hot oils)
Plastic coated paper bags (milk cartons, juice boxes, ice cream cartons, food takeout containers, margarine, butter or candy wrappers)
Microwave popcorn bags
Foil-lined paper bags
Used aluminum foil or aluminum pie plates

All foodwaste from the pilot program will be unloaded in the tipping building on the east side of the building or at covered Zone 7. Physical separation will occur between this material and other feedstocks. The eastside of the building has a sump for collection any excess liquid. This liquid will be pre-treated before discharge to the treatment ponds by either addition of sodium hypochlorite, ozone treatment or heat as part of the initial enclosed composting process.

The material will be mixed with other feedstocks inside of the building. The addition of additional yard waste, bulking agent or pre-consumer foodwaste will focus on the moisture content, carbon to nitrogen ratio, and porosity. Once the material has been premixed the material

will be moved by front-end loader to the Diamond Z tub grinder. The material will then be completely blended and sized. Once ground the material will move on a covered conveyor line to the enclosed Zone 7 primary pad.

The initial composting step will be performed in the enclosed new Zone 7 building. The material will be preblended and mixed before loading on the floor of Zone 7. Zone 7 is divided in four operational areas that allow smaller batches to be constructed. Each subzone has the capability of controlling fan speed and negative aeration. These Zones will only be run on negative air during the composting process after loading. The ambient air in the building will be drawn off the top of the enclosure similar to the tipping building. This air along with the floor negative air will be vented to the newly expanded secondary biofilter. The door of the building will be kept closed except when adding to or reclaiming material. Material will obtain a pathogen reduction temperature of at least 131 degrees for 3-day period of time. Typically these zones heat up to 120 to 131 degrees within 24 hours and maintain temperatures around 150 degrees for 10 to 14 days before reclaiming. Material will be composted for a minimum of 16 days and maximum of 28 days. A log of temperature readings for each subzone will be maintained in the computer system that documents temperature reading on an hourly basis. The compost will stay on the Zone 7 for a minimum of 16 days but may stay up to 25 days depending on moisture content and or heat values. Oxygen levels will be recorded on a daily basis. Fan speeds will be increase if oxygen drops below 15%.

The material will be reclaimed on to the covered conveyor line. The material will have moisture added on the conveyor line before being place on the Secondary. Due to the small volume of foodwaste and smaller subsections in Zone 7, the secondary process will be combined with compost from the other primaries to make a full Secondary batch. These batches of foodwaste combined with other material will be tracked through the Secondary processing, screening and curing so that final product testing can occur.

TIPPING BUILDING OPERATIONAL PROCEDURE- FOODWASTE ADDED

1. Material (green waste, pre-consumer foodwaste) will be unloaded in the building closest to the Westside.
2. The building shall be maintained on continuous negative aeration while material is in the building. The fan system allows 4 air exchanges per hour.
3. A front-end loader will move material toward the grinder end of the building mixing bulking and greenwaste. All material will move from east to west.
4. Bay doors on East Side of building will remain closed to maximize the efficiency of the fan system unless movement of material through those doors is necessary for mixing and blending purposes.
5. Ecology blocks are maintained in front of the building to direct traffic.
6. Self-haul vehicles may unload in front of the building or woody material may be deposited in the area of the Diamond Z if traffic conditions warrant.
7. Material that is unloaded outside of the building due to operational unloading lengths, height restrictions or self haulers will have the highest priority to be moved into the building or taken directly to the grinder.

8. Pre-consumer food waste will be unloaded in the tipping building and allowed to drain. This will eliminate the odors associated with the liquid. All tipping building material will be mixed inside the building then placed in the operational area adjacent to the grinder in a pre-designated 950 SF concrete pad area. The material will then be loaded into the Diamond Z or grinder based upon material size and consistency.
9. The roll off boxes that are cardboard without significant produce may be tipped at the Diamond Z. If material is unloaded and produce is noticed it will be moved inside of the tipping building.
10. When problems are observed operational personnel will report these to the facility administrator. Continual evaluation of the performance of the operational system and air system will occur in addition to the normal reviews outlined in Section 5.
11. Operational personnel will maintain control of the tipping building area instructing truck drivers where to unload their type of material. When material is unloaded in the wrong location this material will be moved to the appropriate area as the highest priority and the truck driver will be re-instructed for future deliveries. Scale house personnel will initially review material and make determination of material type, operational personnel will make the final decision after reviewing material being unloaded.
12. Maps of the tipping area may be given to drivers for instructional purposes *see figure 3.4A*. Directional signage is currently in place.

Foodwaste Procedure:
All foodwaste from pilot project will be delivered to eastside of building closest to the grated sump. Material will be visually assessed as to yard waste content. Material will be added from bulking agents, other yardwaste, brush to obtain the following:
30:1 Carbon to Nitrogen
50-60% moisture
60% porosity.
All foodwaste will be delivered 1 day per week. After pre-mixing material will be taken to Diamond Z for processing. Material will be loaded from directly into walking floor trailer that will unload inside the building on Zone 7. Alternate design that was used successfully during the 2000 Seattle post consumer foodwaste project was to tip and grind the material utilizing a mobile grinder at the covered Zone 7 area. Less handling occurred and the material could be place on negative aeration and start the composting process in less time.